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INTRODUCTION

Dear colleagues, authors and readers of the Scientific Journal of Polonia University (PNAP – *Periodyk Naukowy Akademii Polonijnej*)!

Congratulation on the release of a new PNAP 44 (2021)!

In this issue we are presenting scientific articles, which deal with urgent problems of language, culture, communication, and education, as well as Sociology and Political Science, issues on health and environment, technology, creativity and implementation, Law and Public Administration.

The collected papers in language, culture, and communication are devoted to actual issues of intercultural communication, poetics, and cognitive linguistics. Special attention has been paid to the investigation of associative conceptual constant of subconcepts E-SPACE and CYBERSPACE, cognitive and linguistic mechanisms of conceptual integration of SACREDNESS, linguocultural representation of ancient myth about Hyperion in modern graphic literature, scenic and dramatic manifestations of theatricality in postmodern literary discourse. A new insight has been gained into such problems as word-formation (lexemes with suffix -ment), historical pragmatics, namely the description of lives of saints in the early Middle Ages as a historical source in the researches of L.M. Berkut.

As to education issues one can find interesting the articles about innovative methods of teaching English in cyber society, education prospects of personal ontological insecurity, theoretical and methodological aspects of prevention deviant behavior in younger adolescents by means of physical training, differential gender approach for girls of the age of 12-15 in the process of boxing training, the investigation of reform of the Ukrainian system of general secondary education.

The scientific issue also contains theoretical, empirical and/or pragmatic researches in social sciences and related disciplines, such as the development of Blockchain technology for effective interaction of civil society and state, trends and forecast of Ukrainian foreign trade relations, common affair of politics and education. Authors in the sphere of technology, creativity and implementation elicit ways of improvement of ecological policy in the activity of motor vehicles technical service companies and data consolidation process of monitoring road network in the information analysis system.

We thank our authors, who have already sent their scientific articles to PNAP, and those, who are going to submit their research results to our journal. We would also like to express our particular gratitude to all the members of the Editorial Board, to the reviewers, and to those who kindly accepted our proposal to work together and contribute to the creation of PNAP.

Władysław Majkowski

LANGUAGE, CULTURE, COMMUNICATION

BLACK HOLE OF CAPTIVITY IN THE UNIVERSE OF WAR

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“Even a cup of coffee for a prisoner of war may
appear as the highest manifestation of humanity.”

Author

Summary

The article examines the psychological features of military servants in captivity. The methodological basis of the research is indicated. The article includes an analysis of the works of experts in various fields of knowledge. Scientific works since the Great Northern War of 1700-1721 until the ongoing Joint Forces Operation in eastern Ukraine were reviewed. We have proved that POW's (prisoner of war) rationalization of conduct is positive because it greatly contributes to the survival in captivity. The expediency of resorting to mimicry for the captured military servants is substantiated. We considered the models of POWs' behavioral mimicry and gave concrete examples. It is determined that the creation of a multifaceted illusion on them (their thoughts, reasoning, and attitude) is the basic condition for successful mimicry of POWs.

We defined the dependence of the duration of the POW's process of adaptation to new conditions on the individual cognitive interest of a particular serviceman, as a natural desire to get information about the environment and understand the laws of its functioning. It is identified that the process of the POW's adaptation involves a review of their values of life. The necessity of vaccination against captivity is theoretically substantiated and proved.

We proved that rehabilitation measures are mandatory for all persons released from captivity. The results of the research allow forming a holistic view of the effectiveness of POWs' behavior regulation using symbolic mimicry, the importance, and the expediency of further research.

Keywords: POW (prisoner of war); vaccination against captivity; uncertainty; stress; emotional death; additional trauma; starvation; behavior regulation; symbolic mimicry; illusion.

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1. Introduction

Captivity is when the world of things around, which was in the process of steady increase, suddenly falls into a black hole. At the same time, the possibility of interaction with that world disappears. There is a complete collapse of the worldview of a military servant.

Getting captured is characterized by the loss of serviceman's habitual sensations. Perceptually, a person no longer can perceive familiar signs that symbolize security, predictability, and sustainability of the future. A POW falls into a universe of uncertainty, where a human can do nothing because almost nothing depends on his/her will. A POW faces many situations in which the personal experience can no longer be used. A captured serviceman is completely immersed in a new previously unfamiliar value-ideologically dimension which confuses a person and requires the replacement of old concepts of survival with new ones. Ambivalent thoughts and feelings only increase the POW's feeling of helplessness in the face of new challenges and threats. The process of adaptation to the conditions of captivity involves an in-depth study of the new environmental terms. During the process of adaptation, there is a gradual inclusion of POW's personality in the information environment. Here, a human draws new knowledge which was not a part of his/her previous experience.

The methodological basis of our research is the study of personal factors of stress management in the special conditions of V. Osodlo; symbolic regulation of individual conduct of O. Khmiliar; the research results of captivity in war of Yu. Shyrobokov; marine captivity of A. Pobidash; narrative stories of S. Asieiev, V. Hlukhovskiy, Edwin E. Dvinger, D. Pavlychenko, V. Frankl. Specific clusters of Internet resources, reports of international missions and organizations are deeply researched.

Given the relevance and insufficient elaboration on the problem, the aim of the article is the further theoretical analysis of psychological characteristics of the behavior of a serviceman in captivity. This article considers the psychological mechanisms of regulating POWs' behavior through symbolic mimicry, as one that contributes to survival in captivity. Theoretical research methods were used in the process: observation, analysis, synthesis, comparison, and generalization.

2. Body text

Formation of the worldview of modern military servants takes place under the influence of dominant tendencies of the Ukrainian society, national integration into the European community, NATO bloc structure, and professional military training. The less a serviceman is prepared for possible capture and captivity, the more expected physical and mental trauma a human may experience in captivity. A lot of armies around the world have already got training programs for possible capture and survival in captivity. Domestic psychological science did not stay away from the process.

Having studied the psychological aspects of captured servicemen, O. Khmiliar states that this awareness by a serviceman is delayed. At first, a serviceman cannot believe what happened (*Khmiliar, 2017*). The adaptation of a serviceman to captivity is gradual, based on information coming from the environment in the process of interaction with him/her and others. The success of POWs' adaptation is associated with the development of their ability to quickly perceive, accumulate, and assimilate information about environmental change. It should be noted that adaptation to new conditions depends on the individual cognitive interest, as a natural desire to get information about the environment and understand the operational principles. Thus, we can assume that servicemen with well-developed social intelligence can adapt to new conditions in a shorter time and thus alleviate their situation compared to other POWs. It is worth noting that for such individuals the situation of uncertainty is not a factor of stress and frustration. But it acts as a resource for achieving and maintaining a sense of psychological well-being (*Osodlo, 2013; Cherevychnyi, 2019*). In this context, tolerance to uncertainty should

be seen as a stable personal characteristic that shows a person's willingness to make decisions on which he or she feels insecure or at risk.

The guards are delighted with their courage towards defenseless people, as POWs usually cannot complain about their arbitrariness. The burden of all mistakes and miscalculations of the camp administration is shifted to POWs when emergencies occur.

Captivity is a continuation of military service and it is not meaningless, because the "army behind the barbed wire" continues to wage its war. This war is in the struggle for one's self, one's own life, and one's consciousness. This struggle is superior to the struggle at the front, although it is fought in the backyard of war (*Dvinger, 2020*). Such a struggle leads to maturity, which is unattainable in everyday life.

3. Vaccination

Targeted psychological training is a vaccination that aims to prevent significant trauma (physical and psychological) of a military servant. It should include preparation for interrogation, skill formation of evading the answers, and manipulating of information, including using symbolic mimicry. The need for special psychological training of the military in case of captivity is approved and actively implemented in most of the leading armies of NATO bloc countries. It is justified by the fact that a certain model of adaptive behavior of a POW can help him/her survive in captivity. One of the main goals of mental preparation for the captivity is to train self-control under strong psychological pressure. It is achieved through an artificial and controlled approximation of the conditions of servicemen's stay to the conditions of real captivity.

Since the captivity conditions are alien to the conditions of everyday life, and to reduce the stress reactivity of servicemen, it is necessary to decrease artificially the level of novelty of such situations, which can be achieved through special training. The human body decodes the signals coming from the burden at practice and during combat activities in the same way. Thus, preparation for possible capture can maintain the physical and psychological health of a serviceman. According to K. Ulianov, the stress reaction of a serviceman is a motivating factor for adaptation to a new environment (*Ulianov, 2020*). When a serviceman is captured, he/she must realize that a couple of years and several hundred kilometers will now separate a POW from freedom. The POW's release may not occur immediately, but a person will be definitely released. The State is making every effort to release him/her as soon as possible. The ability to interpret signs and signals depending on the situation and its context acquires particular significance for a POW.

Quick orientation in a situation of uncertainty of the present-day captivity is the basis of skills that a serviceman must have (*Cherevychnyi, 2019*). To speed up adaptation to conditions of uncertainty, POWs should learn from the experience of those who were captured earlier, because imitating their behavior, the prisoner is on the path to saving his/her own life.

Another component of the survival skills in captivity is the skill of a serviceman to put his/her will before the physical beginning. Throughout military history, they save on prisoners. Quality eating for the own army is always an urgent issue of any warring country, so prisoners are the last of those who can count on worthy food. The guards deliberately resort to man-made food deterioration of POWs to inflict additional trauma. Every POW should be ready for prolonged fasting. Love, friendship, envy, mercy, humanity, hunger for fame, and honesty – these feelings disappear as a piece of junk during prolonged starvation (*Dvinger, 2004; Shalamov, 2013*). Lack of suffering – that is the happiness of a prisoner. Mastering the

ability to enjoy the simple pleasures is a protection from despair and suicide (*Frankl, 2018; Hlukhovskiy, 2008; Khmiliar, 2017*).

Released prisoners note in their numerous testimonies that they had the possibility of committing suicide almost every day, and there were many reasons for it. The question of whether to fight for his/her life becomes existential for a POW (*Frankl, 2018*). Silence is the way to save energy.

The only thing that remains unattainable and belongs purely to the prisoner is his/her inner freedom and dignity. Surviving in captivity “with honor” or “at any cost” is a conscious choice of every serviceman (*Asieiev, 2020; Hlukhovskiy, 2008; Pavlychenko, 2014; Frankl, 2018; Shyrobokov, 2020*).

4. Mimicry

Creating a multifaceted illusion about oneself (one's thoughts, considerations, and one's attitude) is a fundamental condition for successful mimicry of POWs. Symbolic mimicry is a sensory-intuitive formation, a synthesis of thoughts, feelings, and images that construct and generate an infinite number of processes and states which regulate the actions and deeds of a POW. The endless ingenuity of the mind must help a POW on a daily basis. Getting rid of all sorts of suspicions on the part of the guards and becoming as if one with the “grey mass” of other prisoners is an important condition for survival in captivity.

Entering into captivity symbolizes the beginning of another life, different from usual. And in this new life, a human must learn to live under the new rules. Destabilization of the living space happens to a serviceman. A whirlpool of previously unfamiliar sensations absorbs the old perceptual experience of the prisoner's personality. The previous life of a POW seems to be a dream or a fiction which has nothing to do with the moment, hour, and place where a person is now. They look too striking in the mind of a prisoner. In captivity, habitual things change their value and their scale. A POW's life is a continuous chain of humiliations from morning till night, until a blessed sleep takes his/her consciousness away from suffering. A constant reflection of the experiences and thoughts governs the individual conduct (*Illiushchenko, 2020*). Mind tricks, natural or acquired, must be on the guard of the POW's life-preserving, the physical and mental health.

The use of POWs as labor force has been widely used throughout the history of captivity. In the captors' eyes, the POW's life may cost no more than the clothes a human is dressed in (*Shalamov, 2013*). An important factor of the man-made deterioration of conditions in captivity and infliction of additional suffering is the POWs' involvement in work which is life-threatening or harmful to their health. That is why POWs are left without proper clothing and equipment during dangerous work. For further injuring of the prisoners, safety rules are deliberately neglected during their work.

If the conditions of captivity require hard work, and smoking POWs are allowed to smoke, it is advisable to pretend to smoke. After all, the rest of the POWs at work is a challenge to the very system of punitive captivity and almost a crime, but a smoke break every hour is a rule. A smoke break for a prisoner is not only an opportunity to rest and save some energy, it is above all an opportunity for information exchange (even in short phrases). The behavioral mimicry of a POW can be embodied by substituting verbal signals with nonverbal ones (replacing words with gestures).

During the recruitment process, a POW must develop the ability to predict for what kind of jobs a work team will be formed in order to take a place in the work team that will have easier

work. The POW's behavioral mimicry is embodied in a particular game in the proxemic system. Certain actions can be an example of such a game: moving away from the guard, stepping aside, disappearing from the guard's field of view, and appearing at the right time when lining up a small work team. Usually, large teams are recruited only for hard physical work. Mind tricks are usually the ability to understand people, anticipate their actions, and crack their motives. The POWs' answers must be short and only with the question because unnecessary words irritate the guards. After all, the identity of a prisoner is despised and humiliated in every way. Uncertainty over the future and lack of information (unlike inmates in prison) about the end of captivity deprives a POW of the opportunity to calculate the (moral) strength, and sometimes even exhausts a POW. Eventually, such a prisoner completely loses interest in his/her fate, and life seems no better than death. Along with this, a fear of death disappears.

During the captivity, a POW always witnesses cases of abuse and humiliation. In the future, it ceases to cause resistance or disgust, and something like an emotional death comes to a person. A POW stops responding to such scenes (*Asieiev, 2020; Frankl, 2018; Khmiliar, 2017; Shyrobokov, 2020*). Thus, we can argue that it is commendable if a POW has any survival strategy, even if it looks towards the future for only one or two days.

Prisoners are usually guided by their desire to achieve homeostasis. They seek to ensure a balance between conservation and loss of energy because the lost energy cannot be returned to the captive by poor food (*Serhiichuk, 2001*).

At the same time, the narrative stories of released persons show that prisoners can always count on the sympathy of at least a certain part of the local population and even the guard. POWs must use this treatment to their advantage to improve living conditions, better nutrition, and receive emergency supplies and medicines.

5. Nonverbal cues

The human face is a poly signal system and an important physical characteristic of his/her internal state (*Khmiliar, 2016*). In order to establish constructive communication in his/her favor, a POW must be able to interpret correctly both verbal and nonverbal signals of the guards. Usually, the hands of the guards are on the weapon, and their body position is distorted by wearing a bulletproof vest. Therefore, the manifestations of facial expressions become especially important. Well-known scientists who laid the foundation for the study of facial expressions are C. Darwin, P. Ekman, and C. Izard. An obstacle to the correct interpretation of the guards' facial expressions is the wearing of military masks (balaclavas). It does not allow fully decoding their mood and attitude to the prisoner. The guards hide their faces to avoid further identification to be prosecuted for war crimes. In this situation, the most informative channel for nonverbal information is the eyes of the guard. Hiding the face by the guard contributes to the depersonalization of his/her conduct, the release of aggression, as well as the dominance of secret behavioral intentions. Depersonalization through identity masking promotes antisocial behavior and encourages guards to act aggressively against prisoners, breaking the usual taboos on interpersonal violence.

In 2019, humanity faced a pandemic of **COVID-19**. Anti-epidemic measures around the world require wearing of medical masks in public places that cover the nose and lips. Like POWs, humanity is deprived of several channels for getting and further decoding the facial expressions of another communicator. Conditionally, humanity ends up in the same conditions as POWs. An important channel for obtaining nonverbal information, that remains available, is the eyes. At the same time, the facial expressions of a POW should enhance the meaning of the

words he/she said, or at least not refute them. The arm movements, the hand position, the head tint, the body inclination must also be the part of “one symphony”, i.e. be congruent. The gaze of a prisoner should not challenge the person under whose authority a human is staying now.

6. Conclusion

We can say that the capture of a serviceman symbolizes the beginning of another life, different from usual. In this life, a person must learn to live according to the new rules. The enemy's task is to enslave the body and destroy the identity of the prisoner of war. A POW falls into a universe of uncertainty, in which a human can do nothing because almost nothing depends on his/her will. A POW faces a large number of situations where the personal experience can no longer be used. A captured serviceman is completely sunk into a new previously unfamiliar value-ideologically dimension which confuses a POW and requires the replacement of old survival concepts with new ones. Ambivalent thoughts and feelings only increase the prisoner's sense of helplessness in the face of new challenges and threats.

The infinite ingenuity of the mind must help POWs on a daily basis. Creating a multifaceted illusion about them (their thoughts, views, and attitude) is a fundamental condition for successful mimicry of POWs. In our opinion, symbolic mimicry, as a regulator of the actions and deeds of a POW, can hide true thoughts, feelings, and attitudes. This will greatly contribute to survival in captivity. It should be noted that a POW personality who is tolerant of uncertainty does not experience the destructive effects of stress and frustration. In this context, the situation of uncertainty is a resource for achieving and maintaining a sense of psychological well-being. For achieving the psychological willingness of servicemen to be in captivity during training, it is important to have elements of intentional suffering (hypokinesia, humiliation, physical pain, etc.), which are integrated into the experience of a serviceman and will not cause significant stress reactivity.

Being in captivity is not meaningless, because the “black hole of captivity” cannot absorb a person who continues to fight for his/her self, life, and consciousness. It should be remembered that a person is capable of more than she thinks, if her life depends on it.

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INNOVATIVE METHODS OF TEACHING ENGLISH IN CYBER SOCIETY

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Summary

This paper discusses the innovative and interesting methods of teaching English. There are variety of teaching methods ranging from traditional to modern. Everyone has their own perspective and conclusions about teaching English as a foreign language. It is proved that whatever the teaching methodology, it must be centered on the learner as his mind is never static; it is constantly growing and changing. The practical part of this article aims to show the awareness of teachers regarding the innovative technologies and methodologies as well as to locate students' reactions to the implementations of these methodologies.

Keywords: teaching methodology, innovation, technology, second language learning.

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1. Introduction

Nowadays, due to the continuous development of educational technologies and teaching methodologies, teachers are facing a great challenge. They must not only stay up with the emerging teaching methodologies but also with new educational technologies that have become an integral part of the educational process.

This article discusses on innovative teaching approaches and educational tools. It also aims to show the awareness of teachers regarding these technologies and methodologies.

The vast pedagogical group is only now beginning to comprehend the educational technologies' position in the modern educational system. It's because of the rapid growth of stance/remote education, which was made more relevant by the COVID-19 lockdown. It became clear that it was not only a good example of a foreign educational experience but that it was also our own (Babelyuk, 2020; 2021).

Teachers of English as a second language employ a variety of techniques, practices, and tactics based on methods derived from approaches or language learning theories influenced by learning theories. (Babelyuk, 2020; Babelyuk, 2021; Brown, 2001; Freeman, 2008; Harmer, 2001; Nunan, 1999; Richards & Rodgers, 2002; Nunan, 1999; Richards & Rodgers, 2002). What they're doing in class is a reflection of a method, the application of a specific principle, and "the

formulation of a constructive approach imposed on the learning process” (Widdowson, 2003, p. 19). However, many English teachers use methodological techniques without recognizing the theoretical connections. For them, tangible changes and outcomes are valid and necessary; they must observe student learning and monitor progress. Learning is, in reality, an overall corollary of education, and what matters most to language teachers is the evolution of learning, which can only be evaluated by meaningful learning outcomes.

On the other hand, there are English teachers who actively use the methods and concepts of the methodologies they advocate (Malanyuk, 2019). They see a theoretical connection between learning theories, techniques, and processes, as well as learning. Naturally, deciding which techniques and strategies are best and/or most suitable for their own teaching situations is extremely difficult (Babeluyk, 2020; Harmer, 2001, p. 96). When they choose from a variety of strategies or techniques, they are often referred to as eclectic. “Eclecticism is not the same as random expediency, a spontaneous reaction to immediate circumstances, but rather a matter of selecting from a variety of options,” says the author (Widdowson, 2003, p. 19). As a consequence, English language teachers must be acquainted with these methods or approaches to accurately use them.

For many years, Communicative Language Teaching was regarded as a paradigm shift in language learning. “Communicative Language Teaching has evolved into a generic “umbrella” term for educational sequences aimed at improving students' ability to communicate” (Harmer, 2001, p. 86). There are still some language teachers who regard this methodology as the final method of language instruction. Indeed, Communicative Language Teaching was a watershed moment in the history of language learning. Previously accepted facts and practices in language learning have begun to be questioned. The grammar teaching method became outdated; activities and tasks were all communicative in nature, and classrooms and materials were redesigned to provide learners with additional communicative options and opportunities. Language teachers became the method's primary adherents.

Following Communicative Language Teaching, significant events occurred that altered the latitude and characteristics of learning in general: the integration of computer technologies into education, the impact of constructivist learning theory, and the widespread use of the internet in all facets of human life. Similarly, “Language teaching methods have shifted their emphasis away from the personal in language learning” (Huttner, 2012), and learner-centeredness has become a primary factor in designing, planning, and implementing educational practices. All of these changes have resulted in the introduction of several innovative language learning methodologies. These methodologies incorporated or adhered to a variety of language learning theories, approaches, and practices.

The term “methodologies of language learning” refers to “pedagogical practices in general, including their theoretical underpinnings and related research.” Whatever considerations go into determining 'how to teach,' they are methodological in nature” (Brown, 2001, p. 15). Similarly, the term “language learning methodology” is used in this study to refer to pedagogical practices that are based on any particular language learning theory, approach, or method; for example, Audio-Lingual Methodology is used rather than Audio-Lingual Method. Each of these methodologies claims that it improves the effectiveness and appeal of language learning.

The two central components of the language learning process are language learners and teachers. Almost everything in language learning methodologies is structured in relation to learners and teachers (Huttner, 2012). Learners and teachers will find objectives, principles, and techniques. The roles of learners and teachers are theoretically defined in accordance with the methodology of language learning methodologies.

Teachers' primary role is unquestionably to internalize the rationales for these language learning methodologies' practices. Knowledge of these methodologies "provides an additional avenue for professional growth... not through the introduction of novel principles, but rather through the application of novel techniques" (Freeman, 2008, p. 8). Teachers should be developing theory and theorizing their practice, not simply applying theory to practice (Huttner, 2012). They must understand the methodologies' historical context, their relationship to approaches and learning theories, their primary objectives and principles, as well as their applications and practices. They can only be successful in facilitating learning, constructing theory, and theorizing their practice if they are aware of these. As a result, language teachers should look beyond Communicative Language Teaching and incorporate innovative language learning methodologies that already exist.

2. Literature review

Numerous innovative language learning methodologies are in use today. All of these initiatives aim to improve the effectiveness and appeal of language learning. English language teachers should be familiar with these methodologies in order to make informed decisions about which to implement in their classrooms.

The Communicative Language Learning Methodology organizes the entire process of language learning around communication, which is widely regarded as the primary goal of any language. Language learners must understand that language is used for communication and is not out of their control. The learning processes and learning spaces in this methodology place importance on communication, negotiating and conveying the meaning, and interpreting. (Babelyuk 2017; Babelyuk, 2020; Davies & Pearse, 2000; Freeman, 2008; Littlewood, 1981; Nunan, 1999; Littlewood, 1981; Nunan, 1981).

The blended/hybrid language learning methodology combines face-to-face lessons with online learning spaces. Blended learning is the deliberate blending of face-to-face and online learning experiences. Sharma and Barrett state that this methodology "integrates a face-to-face classroom component with appropriate use of technology, such as the internet, CD-ROMs, and interactive whiteboards" (2007, p. 7). "The fundamental principle is that oral and written communication should be optimally integrated so that the strengths of each are combined to create a unique learning experience..." (Vaughan & Garrison, 2007, p. 5).

In Cooperative/Caborative Methodology learners cooperate to improve their language skills. Language learners benefit from one another and their experiences collaborating in groups. Teachers guide students on how to use collaborative and social skills effectively when interacting with one another (Freeman, 2008). In general education, the term "competency-based language learning methodology" refers to all teaching and learning approaches that structure their learning processes around competencies (Kamphorst, Hofman, Jansen & Terlouw, 2013). The methodology focuses on critical language learning competencies and aims to improve learners' cognitive and behavioral abilities.

The Connectivist Language Learning Methodology asserts that it is the most recent paradigm in education. According to connectivist theory, "learning can take place outside of ourselves (in an organization or a database), is centered on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowledge" (Siemens, 2005, p. 8). Language students create networks and nodes of learning instances that are all connected via knowledge pipes. Through the establishment and use of these networks, learning occurs and develops. Language teachers should assist in the

establishment of learning networks and nodes. According to constructivist language learning theory, individuals “construct their own version of reality,” and thus multiple contrasting modes of knowing and describing are equally legitimate (*Brown, 2000, p. 11*). Knowledge is not an abstract isolated phenomenon; it is constructed by individuals drawing on their prior knowledge and interacting with new information. Because things become known or learned through prior knowledge and experience, learners should be presented with numerous opportunities to construct knowledge in their own unique way. Individuals engaged in related activities discover the optimal method of learning or knowledge construction.

The method of content-based language learning integrates content and language. While interacting with the content, learners acquire language skills. In theory, Content-based Language Learning / Content-language Integrated Language Learning Methodology entails the interweaving of content and language “without an implicit preference for either” (*Coyle 2007, 545*). “Through planned, purposeful, and academically based activities that develop students' linguistic and critical thinking abilities and engage them in meaningful and authentic language processing, it fosters a functional language learning environment that goes beyond simply presenting information in a second language” (*Kasper, 2000, p. 3*).

The Differentiated Language Learning Methodology is designed for language learners with diverse intellectual and language abilities. Learners do not have the same knowledge, skills, or potentials. Teachers acknowledge and build on the premise that students differ significantly in important ways (*Tomlinson, 1999*). That is, in fact, true in almost every language class, indicating the importance of reaching out to all students in order to ensure equal and fair participation in learning. Language teachers can differentiate materials, the pace of the lesson, and assessment throughout the language learning process using this methodology.

In Learning by Teaching Methodology students are guided to teach parts of the lesson or even the whole lesson in to learn (*Gartner, 1971*). The learners practice the language in a variety of ways while preparing to teach the content and while delivering the lesson. They devote significant time to preparation and instruction, during which they practice their language skills. During the preparation, organization, and delivery of learning, teachers guide learners on the content and skills necessary to perform the necessary tasks.

According to Lewis (1993), “Lexical Language Learning Methodology is based on the idea that an important aspect of language acquisition is the ability to comprehend and produce lexical phrases as unanalyzed wholes, or ‘chunks,’ and that these chunks serve as the raw data from which learners perceive patterns of language traditionally considered to be grammar” (*Lewis, 1993, p. 95*). Throughout the learning process, language learners are exposed to more lexis-oriented materials and tasks.

The Multiple Intelligences Oriented Language Learning Methodology places a premium on the learners' multiple intelligences. When language teachers plan and deliver language lessons, they take into account their students' diverse intelligence. The methodology is largely based on the theory of multiple intelligences, which is defined as “a pluralistic view of the mind that recognizes numerous distinct and distinct facets of cognition and acknowledges that individuals have varying cognitive strengths and cognitive styles” (*Gardner, 1993*). Multiple intelligences is a learner-centered philosophy that recognizes and develops the multiple dimensions of human intelligence (*Richards & Rodgers, 2002*).

Language learners should be actively involved in the process of language learning, according to the Participatory Language Learning Methodology. All materials should have meaning for students and be integrated into their lives. They must make connections between language learning content and their life experiences, participate in authentic tasks, and take

responsibility for the events that occur around them. "What matters is not the content of subject-matter texts, but rather content that is based on student-identified issues" (Freeman, 2008, p. 150). This methodology encourages students to bring real-world situations into the classroom or to apply the lesson's content outside of class.

The Problem-based Language Learning Methodology asserts that people learn when they encounter problems and engage in the problem-solving process. Language learners, according to the methodology, concentrate on problem-solving and practice while simultaneously improving their language abilities. Students acquire content, strategies, and self-directed learning skills through collaborative problem solving, reflection on their experiences, and self-directed inquiry (Hmelo-Silver, Duncan & Chinn, 2006, p. 100). Language learners are assigned projects structured around themes, tasks, or problems to complete. Throughout the project's completion, learners collaborate with one another, with their teachers, and with all other stakeholders. "Frequently, projects emerge from an authentic context to address contentious or significant social issues and unfold in unexpected ways (Markham, Larmer & Ravitz, 2003, p. ix).

Reflective Language Learning Methodology encourages learners to reflect on their learning experiences, to comprehend the process of learning and their intellectual interaction through an in-depth examination of their learning experiences. "An emphasis on the learner's reflective practice enables autonomous exploration of real-world issues and places a premium on professional knowledge" (Ru, Font & Cebrin, 2013). According to Smith and Trede (2013), reflective learning teaches students how to manage risks with autonomy, creativity, and professionalism.

The Styles and Strategies-based Language Learning Methodology states that learners should be presented with effective strategies for practicing or improving their language abilities and potentials. The learners should attempt to determine the most effective strategies that work best for their unique learning experience. The methodology aims to assist learners in identifying available strategies, comprehending how to structure and use them effectively, and adapting them to new contexts based on their preferred learning style (Cohen, 2011).

Language learners are presented with well-structured tasks as the basic element of their learning in the Task-based Language Learning Methodology. In other words, rather than focusing on language structure, students are assigned a task or a problem to solve (Harmer, 2001). "Rather than an ordered list of linguistic items, the starting point is a collection of tasks" (Nunan, 1999, p. 24). Additionally, due to its connections to Communicative Language Learning methodology and support from second language acquisition theorists, task-based learning has garnered significant attention in applied linguistics (Richards and Rodgers 2002).

Web-based Language Learning Methodology makes language learning more appealing to anyone with an internet connection by utilizing Web technologies. It is a method of language learning that makes use of the Web and makes use of Web-based materials, resources, applications, and tools (Son, 2007). According to the Whole Language Learning Methodology, students study the language as a system of meaning in order to be able to use all of the language's skills and elements to construct knowledge and meaning. The concept of language's "wholeness" here implies that language is not the sum of its various dissectable and discrete components (Brown, 2001). Additionally, learners should view language learning as a system of social practices, rather than as the study of isolated semantic, syntax, and pragmatic rules.

3. Methods

This is a descriptive study aimed at determining English language teachers' awareness of innovative language learning methodologies and investigating their utilisation. The survey method was used to collect data from participants who were chosen at random. The survey method, which typically takes the form of a questionnaire, focuses on a group's attitudes, opinions, and/or characteristics and is very effective at gathering large amounts of information in a relatively short period of time.

To collect data, English language teachers were given a questionnaire with fourteen questions designed to elicit their opinions on the awareness and use of innovative language methodologies and technologies. Descriptive statistics were used for data analysis to describe different pieces of information and was the sole aim of this research. The collected data were analysed with IBM SPSS 20 statistical software to determine the frequencies and percentages of research-related questions.

4. Participants

The participants of the study were 100 English language teachers from schools both public and private in Poland. 34 teachers were between 35 and 43, 22 between 28 and 34, 21 teachers between 21 and 27, and 22 teachers were over 40 years old. Concerning their voluntary contribution, participants were fully informed about the confidentiality and anonymity of their participation in the research on the questionnaires administered.

5. Findings

Almost all of the participants were familiar with Communicative Language Learning Methodology. This is because CLLM receives the most time in nearly all English language teacher training programmes' curricula. Prospective English language teachers learn about the technique in-depth and see communicative language activities in action in the classroom. More than a half of the participants were aware of Task-based-based, Project-based, Lexical, Learning by teaching methodologies, as evidenced by the results. Learning through Participatory, Differentiated, reflective, Connectivist language methodology were only known by less than 20% of the participants. Overall, it seems that English language teachers are less informed of the most up-to-date methodologies, which they are needed to know and use more in their English language classrooms, according to the findings.

When asked if they wanted to learn/study various novel language learning methodologies, as shown in chart 5 participants selected a variety of them. Learning through Content-based, Blended, learning by teaching, project-based, Task based oriented language learning methodologies were the methodologies that they chose to learn/study more than 20% of the time. But the far most popular were Communicative and Grammar translation methods, which might be quite surprising as most of the participants claimed that they are familiar with these methods. The majority of participants showed a strong desire to learn new language learning methodologies. It is important that English language teachers are willing to learn more about novel methodologies and put them into practice. They are eager to put these new conditions of the English language into practice. They have no hesitation about changing their learning styles and strategies, demonstrating their passion for the subject.

Teachers studied most new language methodologies in universities. Academic institutions, of course, serve as the basis for teacher education and professional instruction in the teaching and learning of the English language. Teachers who responded said they used the internet as a secondary source to learn about and research innovative language learning methodologies. Nowadays, the internet is the only source of instant knowledge and information. Teachers should be guided to reputable websites in order to obtain accurate and up-to-date information on language learning methodologies. Via classes, in-service instruction, workshops, and books/articles, only a small number of participants learn/study creative language learning methodologies. This demonstrates the need for such activities to be organised for in-service language teachers. Via academic means, English language teachers need to be taught about new methodologies.

Participants employ language learning methodologies in the following ways: more than half of them (57%) admitted to using methodologies techniques. This shows that when English language teachers are aware of the methodologies, they implement them. It also demonstrates the willingness of English language teachers to try out new strategies. Around 30% of the participants said they used methodologies to structure practices and/or assignments, content design and usage (33%), learner roles (26%), and classroom procedures (36%). It's clear that English language teachers are trained and ready to make effective methodological changes and modifications in their language classrooms once again. They are willing to adapt in order to improve language learning.

When asked how students reacted to new language learning methodologies, the majority of participants said they were positive (percent 82,6). The best judges of successful learning are the students. They are aware of what is beneficial, constructive, and important in their education.

The majority of the English language teachers who used innovative language learning methods considered them to be successful (77 percent). In terms of potential implementation, more than 77% of the participants reported that they plan to use more innovative language learning methodologies in the future. This demonstrates that English language teachers are open to innovative and successful language learning applications once again.

Regarding the usage of new educational technology, nearly 90% of participants claimed they use it. This proves again that the teachers want to follow the innovation. Among all educational technologies' films and videos were used the most often (82%). Also very popular were apps 52%, online worksheets 51%, and online quizzes 55%. This proves that the teachers willingly take advantage of technology

The biggest barrier which stops teachers to utilize educational technology turned out to be the lack of training 37 % and lack of infrastructure 30% following by lack of syllabus 21% and consultation 15%. This demonstrates the need for additional training for teachers and also the need to properly equipped schools with advanced educational tools.

6. Conclusion

Various language learning methodologies were introduced and practiced in language learning after Communicative Language Learning Methodology. Several of these approaches have been deemed to be highly effective and competitive. In their classes, more English language teachers are beginning to use these creative language learning methodologies. Teachers must first become familiar with these methodologies before deciding whether or not to implement them in their language classrooms. To be more effective, they must recognize the connections between language learning theories and methodologies. The aim of this study was to

see if English language teachers were aware of creative language learning methodologies and how they were implemented. Several conclusions were taken from the results review in order to address the study's research questions.

Almost all English language teachers were familiar with the Communicative Language Learning Methodology, but few were familiar with the other language learning methodologies. The results showed that fewer than half of the teachers were familiar with the other language learning methodologies. More than 25% of teachers were unaware of fifteen of these methodologies. Less than 10% of people knew about four language learning methodologies: Learning through Teaching, Competency-based, Differentiated, and Connectivist. In general, we can deduce that English language teachers were not well-versed in innovative language learning techniques.

Teachers of English have shown a strong desire to learn and research these methodologies. The results show that they were eager to learn/study these methodologies and incorporate them into their teaching. They were aware of recent educational developments and recognized the need to develop their clinical practice. More than half of them wanted to learn/study Language Learning through Teaching, Multiple Intelligence Oriented, Web-based methodologies.

The results revealed that during their undergraduate studies, English language teachers were exposed to innovative language learning methodologies. Then they learned/studied these methodologies using the internet. The findings show that English language teachers did not learn or research innovative language learning methodologies through in-service training, courses or seminars.

English language teachers who took part in the research said they used innovative language learning methods in their classrooms. They also mentioned that they applied the concepts of these methodologies to classroom procedures, activity and task preparation, content design and adaptation, and learning assessment. They also claimed that the concepts helped them describe or classify their positions as educators. They understood their students and managed the classroom using the principles of innovative language learning methodologies.

The use of creative language learning methodologies by English language teachers was found to be successful, as evidenced by the analysis of the findings. They also reported that the implementation of these methodologies received positive feedback from their students. Teachers plan to use more of the creative language learning methodologies in the future, according to the findings.

To be more successful, English language teachers must keep up with new developments in language learning. Fortunately, teachers, administrators, and parents now have more tools and resources to guide and direct student learning. The main educational consequence of the current research, however, is that the majority of language teachers are unaware of the advanced language methodologies used in the field. They don't understand how they can use advanced technology in their classrooms by implementing these methodologies. According to the findings, the majority of English language teachers recognized the motivational benefits of using creative language methodologies. They noticed that by using creative methodologies, their students became much more collaborative, involved, and efficient, and their language learning classroom activities became more current and successful. As a result, English language teachers must become acquainted with cutting-edge language learning methodologies as soon as possible. Another educational takeaway from the study is that English language teachers are able to refresh and develop their analytical skills in English language learning. As a result, it is important that in-service English language teachers receive training on new methodologies. Language schools, research institutions, and English language organizations can work together to provide English language teachers with opportunities to learn about language learning methodologies.

More classes, workshops, and in-service training programmes for pre-service and in-service teachers should be made available.

The fact that language teachers use the internet to learn about new language methodologies is another significant pedagogical consequence of the research. For English language teachers, the internet has become the most open-source of knowledge, content, and materials. Then it's critical that English language teachers are led to trustworthy, credible, and meticulously constructed websites by experts in the sector. These websites may also help English language learners with their language learning. The study's conclusion is that language learners are enthusiastic about the adoption of advanced language learning methodologies. When students are inspired and see progress in their learning, they are optimistic. If they do not profit from language learning activities, they are extremely important. They place a high emphasis on successful teaching, as well as practical and functional learning. For more efficient language learning, language learners should be introduced to innovative language learning methodologies as soon as possible.

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CHARACTERISTICS OF WORD-FORMATION ROWS WITH THE SUFFIX *-MENT*

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Summary

The article is devoted to the study and analysis of word-formation rows with the suffix *-ment*. The attempt to identify the patterns and principles of creating English word-formation rows was made. Word-formation rows were studied in terms of their complexity, word-formation ways of derivatives, and the lexical and grammatical nature of the generating words. Not only the verbal, nominal, and adverbial rows, but also the confixed verbal, nominal and adverbial ones were analyzed. Besides, the examples of complex name rows consisting of words formed by combining two stems are presented in this article. The structure of each row was examined deeply with the help of the relator speech of the applicative generative model (AGM), which is a universal tool for studying the structure of word-formation rows in any language. Completing the comparative analysis of R=structures and L=structures helped not only realize how R=structures are resembled in natural language, but also determine the complexity of word-formation rows. It should be noted that word-formation rows with the suffix *-ment* are described in the article in terms of their homogeneity and heterogeneity. The categories of derivatives conjugated with the word-formation suffix *-ment* are systematized.

Keywords: a macro row, L=structure, R=structure, the complexity of rows, homogeneous R=structure, heterogeneous R=structure.

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1. Introduction

Despite the significant contribution of both domestic and foreign scientists to the study of word-formation of the Germanic languages, it is necessary to substantiate and analyze English word-formation rows nowadays. The relevance and novelty of the article is the study of word-formation rows in the English language. The object of the study is English words with the suffix *-ment*. The purpose of the article is to describe word-formation rows. Fulfilling several tasks will assist in achieving the above-mentioned purpose. These tasks are: 1) analysis of morpheme stems according to the part of speech they belong to; 2) classification of rows according to the category of derivative; 3) comparison of word-forming R = series with L=words row; 4) identification the complexity of word-formation rows with the suffix *-ment*.

The methodology of the research includes both theoretical methods such as general scientific and construction methods and empirical ones like descriptive and comparative analysis methods which can lead to carrying out the mentioned tasks. The scientific papers of such linguists as P. A. Soboleva and Yu. A. Shepel will comprise the theoretical basis of the article.

The article deals with the rows consisting of morpheme stems belonging to one part of speech i.e. the verb, the noun or the adjective (with one exception of few examples of morpheme stems belonging to several parts of speech). Rows with polysemantic stems will be considered in our further papers.

2. Definition of the main theoretical concepts

P. A. Soboleva stated that classes of words entering into word-formation relations can represent word-formation rows and classes of word-formation rows (*Soboleva, 1980*). The scientist supposed the word-formation L=rows to be a finite set of natural language words (L=words) that could be both similar and different, but with the same word-formation suffix.

The article is based on the works by Yu.A. Shepel who defines a word-formation row as “a finite set of words with the identical affix at the last derivational step” (*Shepel, 2006: 14; Shepel 2005*). L=structure is a set of word classes of a real (natural) language united by a common word-formation means, e.g. words with the suffix *-ment*: *content, argument, lavement, treatment, assessment, averment, interment*, etc.

R=structure¹ is understood as a set of R=words correlated with L=structures. For example, L=structures of verbal nouns with the suffix *-ment* correspond to such a set of R=words as R_2R_1O , $R_2R_1R_1O$, $R_2R_2R_1O$, $R_2R_2R_2R_1O$, $R_2R_1R_2R_1O$. L=structures of the nominal rows with the suffix *-ment* correspond to such a set of R=words as R_2R_2O , $R_2R_1R_2O$, $R_2R_2R_2O$. The set of R=words such as R_2R_3O corresponds to adverbial structures of L=rows with the suffix *-ment*.

Word-formation rows will be considered according to the principle of their homogeneity and heterogeneity. Yu. A. Shepel states that homogeneous R=structures have the same meaning of *i* at the *n* (penalt) step. If the meaning of *i* at the penult derivational step does not coincide, then such structures are called heterogeneous. Consequently, L=structures can also acquire the properties of homogeneity and heterogeneity (*Shepel, 2006; Shepel, 2009*).

P. A. Soboleva introduces the concept of the degree of row complexity measured by the number of word-formation structures that can be an invariant of a row (*Soboleva, 1980*). In her opinion, there is an inverse relationship between the complexity of R=rows and the number of corresponding word-formation L=rows.

Let's consider and analyze word-formation rows according to the above mentioned characteristics, i.e. the correspondence of R = rows to L=rows and the degree of complexity.

3. Verbal word-formation rows

The verbal rows represent the most numerous group of word-formation rows with the suffix *-ment*. These are rows with a verb as a morpheme stem. R=structures of such rows are considered and arranged below. As a result, we found combinations of numbers corresponding to verbal word-formation R=structures and they can be shown like 21, 211, 221, 2221, 2121. Let's write these sequences as R=words and put down L=words corresponding to these sequences:

R_2R_1O *adornment, pavement, commitment, obligation, commencement, secondment, argument, lavement, attachment, detachment, retardment, amerciamento, management, ejection, recruitment, chastisement, treatment, deplorement, harassment, development, minishment, revetment, publishment*

$R_2R_1R_1O$ *anointment, erasement, amendment, entwinement, procurement, immurement, attemperment, incitement, intendment, avouchment, incensement, derivement*

$R_2R_2R_1O$ *midargument, maldevelopment, overallotment, overcommitment, overattachment, nonagreement, noninvestment, pretreatment, micromanagement, microenvironment*

¹ The language of the applicative generative model (APM) offered by S. K. Shaumyan and P. A. Soboleva was used for analyzing the structure of words and creating word-formation rows. This language is described in details in the textbook by S. K. Shaumyan, P.A. Soboleva “The fundamentals of the generative grammar of the Russian language / Introduction to genotypic structures”. Moscow. 1968. 372 p.

$R_2R_1R_1O (R_2R_2R_1O)^2$ forebodement, posttreatment, diminishment, outsettlement, misgovernment, misalignment, retreatment, reinvestment, restatement, readornment, reassessment, replenishment

$R_2R_2R_2R_1O (R_2R_1R_2R_1O)^3$ repolishment, assortment, adjudgement, admeasurement

There is an example of a heterogeneous row among the above mentioned words, e.g. *anointment, midargument, forebodement, repolishment*. The penultimate relator is both R_1 and R_2 in this row.

Referring to the monograph by Yu. A. Shepel, it is possible to consider an arranged row of R=words to be a macro row of verbal word-formations by the metalanguage level of the applicative generative model (Shepel, 2006; Shepel 1989). Here is an example of a macro row consisting of the above mentioned words: *pavement, erasement, midargument, forebodement, repolishment (R₂R₁O, R₂R₁R₁O, R₂R₂R₁O, R₂R₁R₁O (R₂R₂R₁O), R₂R₂R₂R₁O (R₂R₁R₂R₁O))*.

Table 3.1

Verbal word-formation R= and L=rows

Word-formation R=row	Word-formation L=row
R_2R_1O	adornment, pavement, commitment, obligation, commencement, secondment, argument, lavement, attachment, detachment, retardment, amercement, management, ejection, recruitment, chastisement, treatment, deploiment, harassment, development, minishment, revetment, publishment
$R_2R_2R_1O$	midargument, maldevelopment, overallotment, overcommitment, overattachment, nonagreement, noninvestment, pretreatment, micromanagement, microenvironment
$R_2R_1R_1O$	anointment, erasement, amendment, entwinement, procurement, immurement, attemperment, incitement, intendment, avouchment, incensement, derivement
$R_2R_1R_1O (R_2R_2R_1O)$	forebodement, posttreatment, diminishment, outsettlement, misgovernment, misalignment, retreatment, reinvestment, restatement, readornment, reassessment, replenishment
$R_2R_2R_2R_1O (R_2R_1R_2R_1O)$	adjudgement, admeasurement, repolishment, assortment

Table 3.1 proves that the complexity of the row is 3. Thus, the verbal rows are heterogeneous and complex.

4. Nominal word-formation rows

A nominal word-formation row is a row with a nominal morpheme stem. Let's analyze and arrange R=structures of such rows. There are combinations of numbers corresponding to the word-formation R=structures which look like as follows 22, 212. Let's write these sequences as R=words and represent the words of this sequence corresponding to L=words:

R_2R_2O *indument, muniment, rabblement, ledgement, scriptment, justicement, deviltment, feoffment, enrockment*

² There can be both a verb and a noun at the second derivational step in these words.

³ These words comprise the morpheme stem belonging to both a verb and a noun.

It is necessary to pay attention to the word *enrockment* in this R=structure. The fact is that both the prefix *pre-* and the suffix *-ment* are added to its morpheme stem *rock* at the last derivational step.

$R_2R_1R_2O$ *embayment, empowerment, disillusionment, dismemberment, discouragement, disbarment, disbursement, enserfment, entrancement, enticement, encystment, accoutrement, disparagement, debouchment.*

Nominal word-formation rows are heterogeneous. There is an example of such row *muniment-embayment* with different relators R_2 and R_1 presented at the penultimate derivation step.

Table 4.1

Nominal word-formation R= and L=rows

Word-formation R=row	Word-formation L=row
R_2R_2O	indument, muniment, rabblement, ledgement, scriptment, justicement, devilment, feoffment
$R_2R_1R_2O$	embayment, empowerment, disillusionment, dismemberment, discouragement, disbarment, disbursement, enserfment, entrancement, enticement, encystment, disparagement, debouchment

Table 4.1 shows that that the row complexity is 2. So, the nominal rows will be considered to be simple and heterogeneous in structure.

It is worth paying attention to another structure different from the above mentioned one. It is the structure with bound root that can be shown as **R_2O** + *noun with a bound root*. With the help of this structure, it is possible to form a row of complex names e.g. *photopigment, radioelement, pseudomoment, depigment, orpiment*. Analyzing structures with bound roots is not the purpose of the article, so such structures won't be described in detail.

5. Adverbial word-formation rows

The adverbial word-formation row is a row with adverbial morpheme stem. Let's consider adverbial word-formation rows with the suffix *-ment* and arrange R=structures of these rows. There are combinations of numbers corresponding to adverbial word-formation structures which look like as follows 23, 213. Let's write these sequences as R=words and represent the words of this sequence corresponding to L=words:

R_2R_3O *securement, jolliment, supplement, merriment, sacrament*

$R_2R_1R_3O$ *annulment, ascertainment, estrangement, disablement, embrittlement, enfeeblement, ennoblement, enlargement, refreshment, revilement, refinement*

Here is an example of an adverbial word-formation row which has a heterogeneous structure, e.g. *securement – annulment*, with different relators R_3 and R_1 at the penultimate derivational step.

Table 5.1

Adverbial word-formation R= and L=rows

Word-formation R=row	Word-formation L=row
R_2R_3O	securement, jolliment, supplement, merriment, sacrament
$R_2R_1R_3O$	annulment, ascertainment, estrangement, disablement, embrittlement, enfeeblement, ennoblement, enlargement, refreshment, revilement, refinement

Table 5.1 displays that the row complexity is 2.
Thus, adverbial rows will be simple with heterogeneous structure.

6. Typological characteristics of word-formation rows

The structural organization of word-formation rows implies the partitioning principle, then these elements are combined into the whole structure.

Yu. A. Shepel states that the type of word-formation rows is determined, on the one hand, by the type of derivatives according to the word-formation method at the last step of derivation (*Shepel, 2006*). It means that rows can be prefixed, suffixed or confixed. Besides, the type of rows depends on the lexical and grammatical nature of the derivational elements of rows (verbal, nominal, adverbial) or morpheme stems (verbal, nominal, adverbial).

Table 6.1

**Typological characteristics of word-formation structures
of the confixed macro row of nouns (L)**

Derivative category	R=word	Step No.	Confixed derived words (of natural language)	Generative word (words of natural language)
Verbal nouns R ₂ R ₁ X	R ₂ R ₂ R ₁ O	II	overinvestment overrecruitment overallotment overattachment overcommitment malinvestment maldevelopment maltreatment microenvironment micromanagement	invest recruit allot attach commit invest develop treat environ manage
	R ₂ R ₂ R ₁ O (R ₂ R ₁ R ₁ O)	II	misgovernment misalignment	govern align
	R ₂ R ₂ R ₂ R ₁ O (R ₂ R ₁ R ₂ R ₁ O)	III	adjudgement admeasurement	judge measure
Nominal nouns R ₂ R ₂ X	R ₂ R ₁ R ₂ O	II	embayment empowerment disillusionment dismemberment discouragement disbarment disbursement enserfment entrancement enticement encystment	bay power illusion member courage bar burse serf trance tice cyst
Adverbial nouns R ₂ R ₃ X	R ₂ R ₁ R ₃ O	II	enfeeblement ennoblement enlargement refreshment revilement refinement	feeble noble large fresh vile fine

Table 6.1 shows the main characteristics of the confixed word-formation rows by the category of the derived word. R=structures are grouped by the nature of the last derivational step. The structure of R_2R_1X corresponds to a verbal noun, R_2R_2X – to a nominal noun, R_2R_3X – to an adverbial noun.

Table 6.1 proves the fact that any structure will comprise a verb either as a morpheme stem or at the first derivational step. While analyzing rows with both verbal and nominal morpheme stem, we came to the conclusion that these rows have two word-formation R=structures, one of which has the verb at the second derivational step.

Let's consider categories of derivatives conjugated in word-formation rows with the suffix *-ment*. The conjugacy will be understood as relations of forced connection between the derivational categories of derivatives (Shepel, 2006).

There are some examples of English derivatives implying the usage of the suffix *-ment*.

Table 6.2

Classification of derivatives by number of words

Derivative	Examples of words
-ish-	minishment, ravishment, admonishment, abolishment, establishment, embellishment, astonishment, furnishment, polishment, refurbishment, replenishment, relinquishment, publishment, impoverishment, Englishment, bashment, banishment, lavishment, perishment, vanishment, blemishment, burnishment, cherishment, fleshment
-age-	assuagement, management, enragement, disparagement, engagement
-ach-	impeachment, preachment, detachment, attachment
-isse-, -ise-, -ize-	aggrandizement, amortizement, advertisement, advisement
	divertissement, chastisement
-ass-, -ess-, -ase-	assessment, amassment, harassment, embarrassment, passement, basement, easement, incasement, abasement, erasement
-ail-, -ain-	ailment, bailment, assailment, obtainment, detainment, derailment, engrailment, retailment, curtailment, entailment
-oach-, -ouch-	encroachment, avouchment, debouchment
-ite-	excitement, inditement, incitement, invitement
-ieve-, -ive-	achievement, contrivement, derivement
-ave-	pavement, lavement, slavement, enslavement, bereavement
-er-	bewilderment, disseverment
-ign-	consignment, assignment
-uce-	educement, deducement, traducement, introducement, seducement
-ace-, -aze-	defacement, effacement, placement, gazement, mazement

Table 6.2 shows that the suffix *-ish-* is the most productive one as it is added to the suffix *-ment* most of all, suffixes *-ace-*, *-aze-*, *-uce-*, *-ass-*, *-ess-*, *-ase-*, *-ain-*, *-ail-*, *-isse-*, *-ise-*, *-ize-* take the second place. All other derivatives are not numerous by the number of generated words. The structural and semantic aspects of word-formation rows with each derivative will be considered in our further papers.

7. Conclusions

The article provides an overview of the word-formation rows with the suffix *-ment* according to the main criteria of word-formation rows. The basis of this analysis and review comprises the results of the research we have today.

According to the part of speech of the morpheme, the rows are divided into verbal, nominal and adverbial. Consequently, word-formation rows are paradigmatic, since the motivators are morpheme stems belonging to different parts of speech.

According to homogeneity and heterogeneity, the presented rows are heterogeneous, because there are relators of different parts of speech at the penultimate derivational step. The verbal rows are complex and the nominal and adverbial rows are simple.

Suffixes conjugated with the formant *-ment=flex* are considered in the article. In conclusion, one may state that the suffix *-ish-* comprises the largest group of words with the suffix *-ment-* presented in the table. The structures and models with each suffix will be described in more details in our future papers. The purpose of our further research is to study word-formation rows with homonymous and polysemous morpheme stems.

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EDUCATIONAL PROSPECTS OF THE PRACTICAL SOLUTION OF PERSONAL ONTOLOGICAL INSECURITY

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Summary

The article considered the problem of ontological insecurity of man and the optimal educational options for its solution. The history of the concept of “ontological insecurity” in the works of R. D. Laing, A. Giddens and J. Young was considered. It is revealed that the ontological insecurity of a person is caused by macrosocial factors (migration, war, pandemic, social crisis). Adverse communication and family relationships are macrosocial factors in person's ontological insecurity. The separate directions of psychotherapy of the ontologically insecure person were analyzed. The author considered possibilities of psychotherapeutic intervention in the correction of psychological consequences of staying in distorted family systems (M. Bowen). Family therapy, based on Bowen's theory, aims at increasing the level of differentiation of the self in the client's emotional system, leading to a decrease in the manifestations of somatic, psychological or social symptoms. In the 1970-80s, family psychotherapy was embraced by the process of changing orientation from psychoanalysis and behaviorism to a more cognitive model. The study found that the solution of the problem of ontological insecurity of the person lies in the plane of realization of educational, psychological educational programs. Work to reduce ontological insecurity can be carried out by psychological services of educational institutions, which offer free assistance (trainings, consultations) with elements of individual and family therapy to all participants in the educational system.

Keywords: micro- and macrosocial factors, family system, relationships, communication, psychotherapy.

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1. Introduction

The rationally organized social life, based on laws and regulation of social behavior and development of individual and community prosocial activity has great educational importance. Such social life of individuals ensures predictability, conflict-free and sustainable community and state as a whole. Educational tasks of organization and regulation of social life are aimed to reduce the risks of disorganization of society, play a prevention role in the occurrence of social fears, support human ontological safety. However, in society, during its crisis periods (economic, financial, war, forced resettlement of individuals, etc.), spontaneous processes characterized by certain instability, uncontrolled relations are always increasing. Actually spontaneous processes, formation of volatility zones, common uncertainty in society is a threat to the ontological safety of people, and therefore an important problem of educational institutions. Ontological safety as a sense of security, is formed in the conditions of interaction of the individual with institutions (family, school, college, university, professional activity). Therefore, ontological safety is based on institutionality, on the system of status, role-playing interactions between individuals. It is appropriate to distinguish micro- and macro-social levels at which

ontological security may be weakened. At the microsocial level, such zones of volatility include crisis situations in social relations.

Many authors have addressed ontological insecurity as an analytical category at different times, in particular well-known researchers: psychiatrist of existential-phenomenological direction R. D. Laing (*Laing, 1960*) sociologists A. Giddens (*Giddens, 1999*), J. Young (*Young, 2007*). The problem of codependency and its possible solutions have been considered in the context of family psychotherapy (works by G. Bateson, M. Bateson, M. M. Bowen, R. Laing, M. H. Erickson, L. Hoffman, J. Haley, V. Satir, C. Whitaker, S. Minukhin, S. M. Palazzoli, D. Jackson, J. Weakland and others). The problem of loss of ontological security is relevant for the modern educational system. The aim of the study is to justify the need for a broad socio-psychological approach to solving the problem of ontological insecurity in families with communication dysfunction and interdependence of its members. The objectives of the article are to define the concept of “ontological insecurity”, to consider the discursive history of the concept, to analyze the psychological experience of overcoming ontological insecurity in family psychotherapy.

2. The concept of personal ontological security

At the macro-social level, it is appropriate to distinguish the factors that provoke the occurrence of uncertainty that destroys the basis of ontological safety. Among them are group and intergroup conflicts, war, crisis phenomena in public life, formalization of social relations. The microsocial level of ontological safety allows us to consider the educational and socio-psychological state of personal ontological security. Ontological security arises in conditions of openness, contact and clarity of the world for people. It exists inside everyday reality. An important condition for personal ontological safety is a trust in family members, parents, which has a psychological basis. On the basis of child's trust in the mother a trust in the surrounding reality is formed (E. Erickson, K. Horny). The absence of hostility, anxiety in the process of relationships and personal interaction with social institutions is similar to the psychological child's trust in the mother. Sociological research show that the level of trust in the institutions of society correlates with the level of fear. The lower is trust in social centers, institutions, in particular educational institutions, the higher is the level of anxiety and fear (*Giddens, 1999*). Therefore, the integrity and wholeness of the modern person can be threatened by various alienated social relations, indifference, disrespect of educational social institutions to the personal and family problems and psychological crises. This is how the society of disparate individuals is exposed. Such society has a number of problems, among which the educational problem of personal ontological insecurity and its overcoming has to be solved (*Young, 2007*).

Only a harmonized self gives a person the sense of presence in the world as real, living, holistic, and continuous (in a timely sense). The outer (social) world, other people are experienced while equally real, continuous, holistic. Actually, this experience characterizes an “ontologically secure person” (*Laing, 1960: 63*). The concept of ontological security – “ontological security” (translation options: ontological confidence, ontological safety) was generally outlined by the existential psychiatrist R. Laing as polar, different from the ontological insecurity of schizoids and schizophrenics, which constituted the subject of his study (*Laing, 1960*).

The existential position of security-insecurity corresponds to the degree of reliability of basic elements of being-in-the-world structuring: I (mental I and the body) and non-I (other people, the world). The outlined existential provisions are specified by another opposition to basic existential settings – embodied and unembodied self). The embodiment of mental I in

body as a physical object, the identification of one's own body (in time and space) continues the integrity of person in his life-in-the-world (this is the embodiment in existential sense).

Instead, instability corresponds to alienation from self and others, and the splits of being in the world. Existential positions of confidence, incarnation, insecurity, find expression in ontological feelings that describe all the diversity of human experiences of themselves and the world. A sense of ontological security allows a person to face social, spiritual, ethical or welcome obstacles painlessly. Ontological security gives a person a sense of confidence in their reality and identity, as well as in the reality of the surrounding world and the identities of other people. Unlike attempts to individualize the concept of ontological insecurity, R. Laing (*Laing, 1985*) revealed it as a pathological experience for the whole society, pointing to a certain responsibility of society for mental disorders.

The integrity, wholeness of a modern person can be threatened by alienated social relations, indifference, disrespect of educational social institutions to the problems and crises of the person and family. This is how the society of disparate individuals is exposed. Such a society has a number of problems, among which the problem of personal ontological insecurity and its overcoming is solved. Only a harmonized self gives a person the sense of presence in the world as real, living, holistic, and continuous (in sense of time). The outer (social) world and other people are experienced as equally real, continuous, holistic. Actually, this experience characterizes an "ontologically secure person" (*Laing, 1960: 63*). A sense of ontological security allows a person to face social, spiritual, ethical or vital obstacles painlessly. Ontological security gives a person a sense of confidence in their reality and identity, as well as in the reality of the surrounding world, the identities of other people.

The scientist imposes mental illness not into abstract ontology of the world, but – into the ontology of society. The normal state of a person, its adaptability costs a lot for personality, it is a thing of high price, payed to society. A person is forced to pay for his "normality" by the formalization of human relations, indifference, "false consciousness", which allows to enter the system of "social fantasies". At the level of social relations, it can be social stereotypes, prejudices, beliefs, political views. At the level of interpersonal relationships – family and group myths. A person who tries to get out of the group fantasy system poses an existential threat to other members of the group because he questions their beliefs and therefore affects their lifestyle. Such people are usually branded by the group with the label of insanity; the group has to protect itself from their influence. As Laing points out, experts in the field of psychiatry call "schizophrenic" those people, who failed in the process of adapting to the world of public hallucinations. Doctors try to "tame" the individual, return him to the system of group fantasy, which he tried to overcome (*Laing, 1960: 62,63*). Therefore, Laing considers schizophrenia not so much as pathology of behavior, but mostly as pathology of communication, a disease of human relationships. He emphasizes that any case of schizophrenia should be considered by researching not one patient, but the entire social context (in particular the family), which allows to find out the origins of pathology. The psychotic condition can be understood as an attempt to preserve a poorly structured existence. When the loss of existence is a danger to the person, the protection is that the person falls into a state of oblivion. "Neurosis is a way of avoiding oblivion by avoiding being" (*Laing, 1960: 62*).

Under the influence of existentialism and phenomenology, the concept of "ontological insecurity" of a person is formed, which is introduced by R. Laing in the field of the philosophy of health. His theory of the aetiology of psychosis "made it possible to perceive the social ontology of marginality, to see in this light the problem of consciousness, interpersonal communication, the role structure of a modern society and to consider the mechanisms of its functioning".

It is difficult to notice the psychotic dimension of codependency in mentally ill people, since the experiences and natural history of the patients' lives are “frozen” by pharmacotherapy.

As R. Laing points out, being in such a “frozen” state, the patient cannot help but look broken, and his/her behaviour is illogical and unnatural. Symptoms of mental illness can be considered as “frozen” elements of certain experiences that must be completed – only then healing occurs (*Laing, 2011: 78, 80, 98*). By combining a systemic vision and an approach focused on subjective experiences, we can make sure that the behaviour of a psychotic patient is not irrational, instead it is rather reasonable when viewed from the perspective of his/her existential position, that is, a certain survival strategy.

3. Ontological insecurity in the family systems theory

There are many similarities between the roles assigned to individuals in the family, and their feelings and perceptions of themselves. “Getting in and out of the role when talking to a neighbour is as easy as taking off and putting on a raincoat. While changing one’s role in own family is more like a desperate attempt to free oneself from a straitjacket”, – noted psychotherapist Z. Moreno (*Moreno, 1987: 38*). It is about the distortion of human experience and the formation of codependency under the influence of certain family systems (in particular, schizophrenic or alcoholic ones) or close “unreal” relationships. The relations that give rise to codependency have been examined in various ways by R. Laing (*Laing, 2011*), G. Bateson (*Bateson & Bateson, 1987*) and M. Bowen (*Handbook, 2019*). The cause of interdependence as a distortion of individual experience can be a specific external strategy of the family.

Bateson's theory of schizophrenia (“double bind”) best describes communication patterns in families of diagnosed schizophrenics. There is a child in a “double bind” situation, who receives messages from his/her parents that contradict each other at the verbal and non-verbal levels and contain a risk of punishment or a threat to the emotional safety of the child. As R. Laing convinces: “The behaviour of a person who has received a psychiatric diagnosis is part of a wider network of abnormal behaviour, distorted communication structures” (*Laing, 1960: 245*). According to Laing, normal people make up our unreasonable society of constant wars and bloodshed. In turn, crazy people have freed themselves from the hallucinatory obligations that condition the lives of normal people and increase their aggressiveness (*Laing, 1960: 245*).

In his family systems theory, M. Bowen develops the concepts of differentiation of self in the family, emotional triangle, nuclear family emotional system, family projection process, multigenerational transmission process, sibling position, and societal emotional process (*Winek, 2010: 81*). The concept of differentiated self, which is the opposite of co-dependent self, is central to the Bowen’s family systems theory. Bowen uses the concept of cell differentiation as a metaphor for describing family relationships. He suggested that people who function as healthy cells achieve the highest efficiency. They consider themselves as an autonomous unit, at the same time connected with other members of a larger emotional organism. From this observation, Bowen got an idea of the scale, or continuum, of the differentiation of self, which distinguishes different (strong and weak) behavioural reactions to merging with a group, detachment from others, rigidity of communication, reactivity. A person’s position on the differentiation scale can vary depending on stresses in the system of relations with others.

According to M. Bowen's family systems theory, the emotional triangle is also a system of relationships consisting of three emotionally connected individuals. The triangle is the basic emotional building block or “molecule” of all systems of human relationships, “the smallest

stable relationship system". When tension increases, the dyad, in order to suppress the anxiety, automatically draws in a third significant person. In calm periods, all members of the triangle (consisting of sufficiently differentiated individuals) can easily change their positions, move from the position outside the triangle to its middle, and so on. As part of the dyad, one person may be less satisfied with the proximity (affinity) than the other, so he/she is more active in forming a triangle. In periods of stress, everyone inside it seeks to move outward to allow the remaining dyad to bring the struggle to an end. It is this configuration that is the basis of a "father-mother-teen" triangle. The father more often goes to the outside position, while the mother and the teenage child "fixate" on each other. If there are other children in the family, then those who are most involved in the processes inside the triangle with the parents "complete this process at a lower level of functioning than a child who is relatively free from parental care" (*Handbook, 2019: 67*). In families where parents have low levels of differentiation from their ancestral families, triangles can be formed in such ways as marital conflict, problems with a spouse, problems with one or more children. Basically, the object of the projection of family non-differentiation (codependency) is the eldest child in the family, the only child, a child with special needs or a child pathologically attached to one of the parents.

The early experience of children in the communication systems of alcoholic parents forms in them a special inner world of emotions, which leads to codependency and psychotization. "The experience of a child staying in a distorted family communication system forms a neurosis instead of a new, meaningful and flexible life perspective". The intra-family role of a "sacrificial lamb", a "rebel" is transferred to other relations and groups. as noted by R. Baron and D. Richardson (*Baron & Richardson, 1994: 20*).

The first attempts to understand the family as a system that generates the distorted experience of its members were made, as already noted, by the American researcher M. Bowen. The basis of the Bowen Family Systems Theory is the position of the human emotional system, which functions without reaching the surface of consciousness. Such manifestations of feelings as sadness, joy, anger, frustration are usually recognized, but they can also manifest themselves at a deeper level: in the form of physiological symptoms or disturbances in relationships. Psychotherapists schooled in M. Bowen's theory define psychological, somatic or social symptoms as a manifestation of the "emotional process", which underlies them and has been formed in complex family relationships for many generations. Family therapy, based on Bowen's theory, aims at increasing the level of differentiation of the self in the client's emotional system, leading to a decrease in the manifestations of somatic, psychological or social symptoms.

4. Constructive psychotherapy with ontological insecurity in the family

Structural psychotherapy also works with the problem of ontological insecurity. S. Minukhin's structural therapy was based on certain ideas about the structure and organization of the family. In the 1950 s, the focus was on the individual unit, that is, work with an individual family member. J. Haley found that the rapid changes achieved by an individual unbalanced his/her entire family. In the 1960 s, a "double communicative unit" was in the focus of researchers' attention, which is related to the specifics of painstaking and lengthy work of a psychotherapist with a patient (*Bateson, Jackson, Haley & Weakland, 1963*). In the 70s, interest in "dynamic and short-term/brief" psychotherapy began to grow in American society. Haley's strategic approach that was formed at that time began to be thought of as authoritarian, openly addressing the restructuring of control and power in the family, which determined the psychopathological symptom.

Psychotherapists under the influence of V. Satir (*Satir, 1983*) (who emphasized in the work of a psychotherapist the need to help the family in establishing truly close, love-filled relationships) considered the strategic method to be formal, fenced off from the emotional bond on which the family holds. However, the transformation of the strategic approach in family psychotherapy continued. Its main successor was M.S. Palazzoli who believed that each member of the family has his/her own strategic line, own choice, own idea of therapy (*Palazzoli, Boscolo, Cecchin & Prata, 1978*). The Milanese method (the method of Palazzoli and colleagues), which was outlined in the book "Paradox and Counterparadox", has become world famous among family psychotherapists (*Sluzki, 2004*).

In the 1970-80s, family psychotherapy was embraced by the process of changing orientation from psychoanalysis and behaviourism to a more cognitive model. Since its inception, family therapy has focused more on changing the way people behave than on changing their way of thinking, but later it made a turn to the "theory of stories" (*Hapon & Vovk, 2020: 9*). People organize the world in short series of meanings, or "stories," "topics" that resemble time flows, arise and transform in the dialogue on which the therapeutic conversation is built. Social constructivism as a guideline for modern psychotherapy is a way to understand: everything that is described by a psychotherapist is created by him/her. Therefore, the psychotherapist is especially careful in assuming the responsibility of an "expert" (*Hapon & Vovk, 2020: 9*). Rejection of "game" with the family, instructions, and orders is a refusal to fight.

Therapy here is a conversation of a special nature. As an image of the therapeutic process, a "conversation" is more accurate than a "game". The conversation equalizes, it does not pursue any specific goal, and no one loses or wins in it. The psychotherapeutic process includes values from the psychotherapist's self, and never from the "objective truth". Psychotherapy unfolds as a dialogue with the family, rather than as the intervention of "social engineers" who bring the values of individual family experiences in line with social stereotypes. Therefore, the distortion of individual experience under the influence of negative family systems or relationships is overcome by various psychotherapeutic areas, and for the new generation of psychotherapists the task of psychotherapeutic changes in the pattern of codependency as a consequence of traumatic individual experience in family systems remains no less dramatic.

5. Conclusions

Optimal educational options for solving the problem of co-dependence lie in the implementation of programs by psychological services of educational institutions, which offer free assistance (trainings, consultations) with elements of individual and family therapy to participants of the educational system. These are important different and effective educational approaches for family members to understand the patterns of their interaction. The attainment of ontological security is possible with help of psychotherapeutic activities, provided by psychological services of educational institutions. Only with help of these structural units of educational institutions it is possible to restore the personal boundaries of a person, awareness of family role differentiation, improvement of family communication and interaction. All this work, done by psychological services of educational institutions will allow to take significant steps towards harmonization of relationship of person and social world, will enhance the quality of educational process in institutions. Finding the ontological security of the student's personality is possible within the training courses (for example, "Person in society", "Helping others", "Psychology of harmonious relationships", etc.), in line with counseling and training of psychological services of universities, all educational institutions.

The problem of interdependence as a marker of loss of ontological security within the distorted communication system of the family is important for the modern educational system, in particular for socio-psychological science and psychological practice, and requires consideration of psychological mechanisms of distorted family systems and psychological consequences of interdependent communication and interaction.

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THE STORY OF ONE NOUN: “ACT” IN ENGLISH AND UKRAINIAN DICTIONARIES AND DISCOURSES

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Summary

The main focus of this article is the analysis of the noun ‘act’ in the Ukrainian and English languages. At the first stage of the research the etymology and the semantic structure of the noun is discussed as well as the variety of its meanings registered in explanatory dictionaries. Special attention is paid to the data provided by a New English Dictionary on Historical Principles. At the second stage of the research special attention is paid to the functioning of the noun under study in the legal discourse. The article provides various definitions of the legal discourse suggested within different scholarly approaches. It also discusses its reference to the legislative and institutional discourses. The legislative discourse is viewed as a part of the legal discourse since legislation encompasses the establishment and further implementation of legal acts. The institutional discourse is considered to be an umbrella term covering all types of discourses brought to life by social institutions (e.g. parliament, Congress, etc.).

Finally, this exploratory enquiry seeks to examine similarities and differences in the semantic structure and functioning of the noun under study in English and in Ukrainian and thus provides the context for follow-up articles on the findings in the field of contrastive linguistics.

Keywords: act, dictionary definition, legal discourse, legislative discourse, institutional discourse.

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1. Introduction

The word ‘act’ is a frequently occurring lexical unit which functions within different contexts both as a noun and as a verb. In particular, the noun ‘act’ is highly polysemantic and can be applied in various senses both in the Ukrainian and English languages depending on the type of discourse. Consequently, the proposed two-part discussion focuses: a) on the analysis of the semantics of the noun; b) on the analysis of its functioning in legal discourse in two languages and two legal cultures.

2. Etymology

Six English Etymological dictionaries were taken into account to examine the origin and the semantics of the noun ‘act’. Having analyzed the selected dictionaries (see *Table 1*) we may claim that the noun ‘act’ originates from Latin *actūs* where it was commonly used to denote ‘a thing done’. In ‘legal’ sense, when used in reference to the legislation issues, it comes from Latin *actūm*. Due to the historical events in England in XI – XV century, the word ‘act’ entered English through Medieval French *acte*. According to the Oxford English Dictionary on

Historical Principles, the noun ‘act’ first appeared in 1384 in the works of G. Chaucer in his Middle English poem “The House of Fame” in a sense of a ‘thing done’; ‘a deed’, ‘a performance (of an intelligent being)’ (*the New English Dictionary on Historical Principles, Volume 1, 1884-1928: 91*). Online Etymology dictionary indicates that the noun ‘act’ comes from Latin verb *agere* which means ‘to set in motion, drive, drive forward’; hence ‘to do, perform’; figuratively ‘incite to action’; ‘to keep in movement, stir up’ (*Online Etymology Dictionary, 2020*). According to the Concise Dictionary of English Etymology, the noun ‘act’ dates back to XIV century when it started to function in the sense ‘deed’, then in XV century – in the sense ‘legislative decree’, and ‘section of a drama’ – in XVII century (*the Concise Dictionary of English Etymology, 2003*). According to A Short Etymological Dictionary of Modern English, the substantive form ‘act’ entered English perhaps via Medieval French/French *acte*, from Latin *actum* – a thing done (pl. *acta*, adopted by English for ‘proceedings, transactions’), originally the neuter plural of *actus*, past participle of *agere*, to (drive, hence) do, but also partly from Latin *actus* (genitive *actus*) – a doing, an action. The verbal form ‘act’ derives from the Latin past participle *actus*, but was influenced by the noun ‘act’ (*A Short Etymological Dictionary of Modern English, 1959*). According to Etymological Dictionary of the English Language, the noun ‘act’ means a deed, from the Medieval English *act*, pl. *Actes* (Table 1).

Table 1

The etymology of the noun ‘act’ in English dictionaries

Dictionary	Via	Definition
A New English Dictionary on Historical Principles	French <i>acte</i> Latin <i>actūs</i> (in some senses)	8 meanings 1) a thing done; 2) a deed; 3) a performace.
Online Etymology Dictionary	French <i>acte</i> Latin <i>actus, actūm</i> (originally a leal term)	1) a thing done; 2) a doing; a driving impulse, a setting in motion; a part in a play.
The Concise Oxford Dictionary of English Etymology	Latin <i>actūs</i> , Latin <i>actūm</i> French <i>acte</i> (partly)	1) a doing 2) public transaction.
A Short Etymological Dictionary of Modern English	Medieval French/French <i>acte</i> Latin <i>actūm</i> Latin <i>actūs</i>	1) a proceeding, a transaction 2) a thing done 3) a doing, an action.
An Etymological Dictionary of the English Language	Medieval English Latin <i>actūm</i> Latin <i>actūs</i>	1) a deed; 2) a thing done.
Chambers's Etymological Dictionary of the English language	Latin <i>ago, actūm</i> Greek <i>agō</i>	1) something done or doing; 2) a deed or exploit; 3) a law; 4) a part of a play.

The Ukrainian dictionaries register several definitions of the noun ‘act’ According to **the Dictionary of the Ukrainian Language** (ed. by Hrinchenko), the noun ‘акт’ (genitive case *акту*) means 1) дія (въ драматическомъ сочиненіи); 2) актъ, документъ (1862) (*Hrinchenko, 1958*). **An Etymological Dictionary of the Ukrainian Language** (ed. by Rudnytskyi) provides the

information that the noun ‘act’ (акт, act, акть) entered Ukrainian in XVI century; the derived words: актовий, актуальний, *-ість*, актыковати, *-анье* (XV century); актыкація (XVII century) – урочистий обхід, церемонія, обряд; документ. It was used in the sense: окрема подія, церемонія, ритуал, документ (*Etymolohichnyi slovnyk ukrains'koi movy, 1982*). In accordance with **Etymological Dictionary of the Ukrainian Language**, the the senses of ‘акт’ developed in the following way: 1) ‘вчинок; театральна дія’, ст. акть (XVII ст.), borrowed from Latin *actus – ago* ‘дію’; 2) ‘документ’, ст. акта (мн.), акты ‘книги для запису документів’ (XVI ст.), borrowed from Latin via Polish; from Latin *actum* ‘розпорядження, протокол’, derived from Latin *ago* ‘дію’ (*Etymolohichnyi slovnyk ukrains'koi movy, 1982*). According to **Etymological and Semantic Dictionary of the Ukrainian Language**, the noun ‘акт’ (genitive case *акту*) comes from Latin *actūm* – дія, мн. *Acta* – дії, від *agere* – діяти; акт – документ, протокол, окремий запис; from Latin *actum* – запис, документ, народне ‘бомага’, from Lat. робити, діяти; first appeared in the XVII century (*Etymolohichno-semantychnyi slovnyk ukrains'koi movy, 1979*).

Thus the noun ‘act’ both in the English and Ukrainian languages has a common origin; comes from Latin *actūs, actūm* and means ‘a thing done’. In English dictionaries, it was first registered with various interpretations between XI and XV centuries, while in Ukrainian ones it dates back to XV century. The development of different meanings in the English dictionaries was influenced by French, Greek, Medieval English, while in the Ukrainian dictionaries – Polish. Common origin explains some similarities in their semantic structure.

3. Semantic structure of ‘act’ and its development

3.1. The English language

The semantic structure of the noun ‘act’ as represented in English and Ukrainian dictionaries displays dynamics of its development. A New English Dictionary on Historical Principles registers eight different meanings of the noun. According to this dictionary, **the first meaning** of ‘act’ is ‘a thing done; a deed, a performance’ (of an intelligent being); In that sense *act* was first mentioned in 1384 in a Middle English poem “The House of Fame” by G. Chaucer. E.g. *Thorow God we shal do greate actes, for it is he that shal treade downe oure enemies*. **The second meaning**: ‘a thing done as a result, practical outcome, or external manifestation of any state, and, whence the state may be inferred’ (1751). E.g. *Austin: the only objects which can be called acts are the consequences of volitions. The involuntary movements which are the consequences of certain and diseases are not acts*. **The third meaning**: ‘a state of accomplished fact or reality as distinguished from subjective existence, intention, possibility, etc’ (1398). E.g. *But my Reason tells me, God is a pure Act, and therefore How can He suffer any Punishments*. **The fourth meaning**: ‘the process of doing; acting, action, operation’ (1494). E.g. *Act of God: action of uncontrollable natural forces in causing an accident, as the burning of a ship by lightning*. **The fifth meaning**: ‘something transacted in council, or in a deliberative assembly; hence a decree passed by a legislative body, a court of justice, ect’ (1593) E.g. *You ... Haue caus'd him by new act of Parliament, To blot out me, and put his owne Sonne in*. **The sixth meaning**: ‘a record of transactions or decrees; any instrument in writing to verify facts (from Latin *actum*, pl. *acta*)’ (1535). E.g. *Judicial Acts are said to be all those Writings, and matters which relate to Judicial Proceedings, and are sped in open Court at the Instance of one of the Parties Litigant; and being reduced into writing by a Public Notary ... are recorded by the Authority of the Judge*. **The seventh meaning**: ‘a performance of part of a play; hence, one of the main divisions of a dramatic

work, in which a definite part of the whole action is completed' (1613). E.g. *Some come to take their ease, And sleepe an act or two*. **The eighth meaning:** 'in the Universities, a thesis publicly maintained by a candidate for a degree, or to show a student's proficiency' (1733). E.g. *The Act was last held after long interruption in 1733; in 1856 the name, with all that related to the ceremony, was removed from the Statute-book, and only survives in the appellation Act Term sometimes given to the Trinity Term* (*A New English Dictionary on Historical Principles, 1884–1928: 91–92*).

Having analyzed various senses of the noun 'act' in Oxford Dictionary, Cambridge Dictionary, Longman Dictionary of Contemporary English, MacMillan Dictionary and Collins Dictionary we discovered some additional senses (see *Table 2*).

Table 2

Senses of the noun 'act' in modern English dictionaries

Oxford Dictionary	Cambridge Dictionary	Longman Dictionary of Contemporary English	MacMillan Dictionary	Collins Dictionary
1) a particular thing that somebody does;	1) something that you do;	1) one thing that you do;	1) single thing someone does;	1) a single thing that someone does
2) a law that has been passed by a parliament;	2) behaviour that hides your real feelings and intentions;	2) a law that has been officially accepted by a Parliament or Congress;	2) behaviour hiding truth;	2) behaviour that does not express their real feelings
3) a way of behaving that is not sincere but is intended to have a particular effect on others;	3) a person or group that performs a short piece in a show, or the piece that they perform;	3) insincere behaviour in which you pretend to have a particular kind of feeling or to be a particular kind of person;	3) performance;	3) a law passed by the government
4) one of the main divisions of a play, an opera, etc.	4) a part of a play or opera;	4) one of the main parts into which a stage play, opera, etc is divided;	4) part of play, etc.	4) in a play, opera, or ballet is one of the main parts into which it is divided
5) performance, especially on of several short pieces of entertainment in a show;	5) a law or formal decision made by a parliament or other group of people who make the laws for their country.	5) a short performance on stage or television by someone who plays music or tells jokes;	5) law	5) in a show is a short performance which is one of several in the show.
6) a performer or a group of performers.		6) a performer or a group of performers who perform together.		

All five dictionaries register the meaning of the noun “act” as 1) a thing someone does; 2) a law passed by the official body (Oxford dictionary indicates Parliament; Longman Dictionary of Contemporary English – Parliament or Congress; Collins Dictionary – government); 3) a performance; 4) insincere or hidden behavior. Apart from Cambridge dictionary, all dictionaries register the meaning of “a part of a play or opera”; Oxford Dictionary, Longman Dictionary of Contemporary English, Cambridge Dictionary present the meaning of “a performer or a group of performers.

3.2. The Ukrainian language

According to the Universal dictionary of the Ukrainian Language, the noun ‘акт’ (pl. акти) means 1) in genitive case *акту* – одиничний вияв якої-небудь діяльності; дія, вчинок. Е.г. *Здійснити акт агресії*; 2) in genitive case *акта* – закон, указ, постанова, які видають уряд, громадська організація або посадова особа. Е.г. *Урядовий акт*; 3) in genitive case *акта* – документ, протокол, запис про який-небудь юридичний факт. Е.г. *Передавати справи за актом*; 4) in genitive case *акту* – завершена частина драматичного твору або театральної вистави; дія. Е.г. *Комедія на три акти* (*Universal’nyi slovnyk Ukrain’s’koi movy, 2007: 21*).

The senses of the noun ‘act’ registered in modern Ukrainian dictionaries are slightly different from the senses, which modern English dictionaries include. According to **the Dictionary of the Ukrainian Language**, the first meaning of the noun ‘акт’ (genitive case *акту*) is окремий вияв якої-небудь діяльності або якогось процесу; дія, подія, вчинок. Е.г. *Обрядовість сватання на Бойківщині була важливим громадським актом, який передував шлюбу і санкціонував його* (з наук.-попул. літ.); окрема дія, поодинокий вчинок. Е.г. *Тепер приходить їхня черга! Було кожному ясно що починався головний акт великої трагедії* (І. Багрянний). **The second meaning** of the noun ‘акт’ (genitive case *акту*): закінчена частина театральної вистави, драматичного твору; дія. Е.г. *Найбільш театральна драматична поема “У пущі”, хоча в останньому акті драматизм понижується* (М. Драй-Хмара). **The third meaning** of the word ‘акт’ (genitive case *акта*): указ, постанова державного, суспільного значення. Е.г. *Акт незалежності – це продовження і реальна дія Декларації про державний суверенітет України, логічний підсумок усього суспільного розвитку останніх років* (з газ.); офіційний документ, протокол, запис про який-небудь факт наявності або відсутності чогось. Е.г. *Здоровань-лісничий заставив скидати стояки на те саме місце, звідки вони були взяті склав акта і поїхав геть* (Григорій Тютюнник). **The fourth meaning** of the noun ‘акт’ (genitive case *акту*): урочисті збори у шкільному закладі або в науковій установі у зв’язку з закінченням навчального року, вручення нагород, тощо. Е.г. *На випускному акті його урочисто вітали викладачі* (П. Колесник) (*Slovnyk ukrains’koi movy, 1970: 158*).

Apart from the variety of definitions provided by the Dictionary of the Ukrainian Language, the following types of acts are distinguished: acts of civil status (акти цивільного (громадянського) стану), audit report (акт ревізії), terrorist act (терористичний акт), business act (дільчий акт) and legal act (нормативний акт) (*Slovnyk ukrains’koi movy, 2010: 158–159*).

Large Explanatory dictionary of the Modern Ukrainian Language provides a couple of definitions as well. For instance: 1) окремий прояв якої-небудь діяльності; дія, подія, вчинок; 2) закінчена частина театральної вистави, драматичного твору; дія; 3) письмовий указ, грамота, постанова державного, суспільного значення; офіційний документ, протокол про який-небудь факт (*акти громадянського стану* – записи спеціальними державними органами фактів народження, смерті, шлюбу, розлучення, тощо; *акт ревізії* – офіційний документ про результати перевірки фінансово-господарської діяльності підприємства,

організації, установи чи посадових осіб за певний період; 4) урочисті збори в шкільних закладах у зв'язку з закінченням навчального року (*Velykyi tlumachnyi slovnyk suchasnoi ukrains'koi movy*, 2001: 11–12).

According to **the Dictionary of the Ukrainian Language**, the noun 'act' means 1) (genitive case *акту*) окремий прояв якої-небудь діяльності; дія, подія, вчинок. Е.г. *Вольові акти завжди спираються на вміння і навички особистості*; 2) (genitive case *акту*) закінчена частина театральної вистави, драматичного твору; дія. Е.г. *Була й новинка Карпенкова – “Суєта”. Перші три акти добрі*. 3) (genitive case *акта*) писаний указ, грамота, постанова державного, суспільного значення. Е.г. *А хутко я вам подарую інакший [перстень], щоб печаті прикладати до командорських актів*; офіційний документ, протокол, запис про який-небудь факт. Е.г. *Сів голова на своє місце за столом, звелів рахівникові акта скласти*. 4) (genitive case *акту*) урочисті збори в шкільних закладах у зв'язку з закінченням навчального року. Е.г. *Другого дня в школі був акт* (*Slovnyk ukrains'koi movy*, 1970: 28–29).

The semantic structure of the noun 'act' has some divergent features in English and Ukrainian languages. In Ukrainian as well as in English, the first and general meaning of the analyzed noun is 'a thing done' (дія, вчинок). Further development of the semantic structure of the word is a bit different in English where we can trace processes of its specialization. In both languages the similar transference of the unit of nomination to the legal and theatrical spheres occurred parallelly and the word developed similar specialized senses. One more similar sense can be considered the result of the generalization as the 'act' obtained the sense of a public ceremony, official event both in the English and Ukrainian. Basically, the definitions included into studied English and Ukrainian dictionaries are the same and display the same tendencies in the development of their semantic structure, in particular in reference to the sphere of law, though dictionary entries of English dictionaries provide more specialized senses like those referring to a hidden behaviour or a group of performers.

4. The word *act* in Anglophone and Ukrainian discourses

The polysemantic nature of the noun 'act' explains its frequent use in different types of discourses. For instance, everyday discourse, theatrical discourse, political discourse, etc. Most commonly 'act' is used in legal discourse.

Law plays a vital role in any well-developed society. Law and legal language are interconnected. Law is verbalized using the language of law. The language of law and how it is used by lawyers and those who deal with jurisprudence is characterized by its complexity. Legal texts make the basic component of legal discourse as the latter can be defined as 'a connected sequence of statements that are subject to the same formation system' (*Foucault, 1996*). The main characteristic features of legal discourse include the following: 1) *informative function*, as legal texts render information; 2) *prescriptive function*, as legal texts are direct or indirect orders to the recipient to perform certain actions or to refrain from committing them; 3) *declarative function* which is performed through the proclamation of certain social and legal designations (mainly used by a testator to distinguish a person with no implementation of the name of such person often as a word of limitation) and ideas; 4) *reasoning function* that is inherent in legal discourse, among which the central types are various types of complaints, statements of claim, recalls of the statement of claim and legal decisions, the communicative aim of which is to justify the reaction of a person to a particular situation demonstrating one or another position (*Alontseva, Ermolova, 2018*).

Legal discourse is an important subtype of Institutional discourse. Institutional component is an indispensable element of the mechanism of development of a society (Andreichuk, 2011) and is commonly defined as “a communication within the established social institutions of the society” (Dijk, van, 2008). It is also defined as the type of discourse “produced in social institutions that presuppose communication as a constituent part of their organization” (Sheihal, 2002). The communication within institutions is viewed as “a stable system of status-role relationships that have developed in the communicative space of the vital activity of a particular social institution” (Rusakova, 2008) and consequently, institutional discourse presents “a specialized clichéd type of communication among people, who might not know each other in person, but should communicate in accordance with the regulations of this community” (Karasyk, 2002: 292). Institutional discourse encompasses social interactions (and thus language) that are situated in settings (though not necessarily “physical” locations) recognizable as “institutional” or what some simply call “work-related” (Ehrlich, Romaniuk, 2013).

Thus institutional discourse is produced by a social community. In the sphere of jurisprudence it should be first and foremost a legal authority, an empowered body, e.g. parliament in Great Britain, The United States Congress in the USA, etc. The latter is the bicameral legislature of the federal government of the United States and presents a social institution, where the functions and the roles of its participants are clearly defined. Social institutions formulate a set of established and sanctioned rules of conduct of the individual in society (Hertzler, 1929: 69). Such institutions are the forms of well-organized human relationships, focused on the establishment of common will (Hertzler, 1929: 256).

Act in its legal context is implemented in institutional discourse. For example, U. S. Congress is a legal authority, which issues acts. E.g. *Sec. 102. Except as otherwise provided in this Act, for so long as they continue in the nonimmigrant classes enumerated in this section the provisions of this Act relating to ineligibility to receive visas and the exclusion or deportation of aliens shall not be construed to apply to nonimmigrants – (Immigration and Nationality Act of 1952: 173).*

The example of the Ukrainian institutional discourse is taken from the Constitution issued by its legislative body, Verkhovna Rada: *Конституція України має найвищу юридичну силу. Закони та інші нормативно-правові акти приймаються на основі Конституції України і повинні їй відповідати (Konstytutsia Ukrainy, 1996).*

Legal discourse is a part of institutional discourse as legal communication is characterized by its institutionality (Alontseva, Ermoshin, 2018). The participants in legal discourse have their roles and the norms they should follow. The participants of legal discourse act in accordance with different legal authorities (Palashevskaya, 2010). Thus, the legal discourse has its aim, concrete participants and well-organized speech situation. This type of discourse functions in different spheres: 1) court hearings; 2) communication (e.g. attorney vs. client; notary vs. client, etc.); 3) an oral interrogation of a witness; 4) legislative documents (laws, contracts, agreements); 5) court records and court decisions (Koval, 2006: 87–97). E.g. *Sec. 2 That there shall be levied, collected, and paid a tax of \$8 for every alien, including alien seamen regularly admitted as provided in this Act, entering the United States: Provided, That children under sixteen years of age who accompany their father or their mother shall not be subject to said tax (Immigration Act of 1917: 875).* E.g. ... *а також форма заповіту і акта його скасування визначаються правом держави, у якій спадкодавець мав постійне місце проживання в момент складання акта або в момент смерті (Zakon Ukrainy “Pro mizhnarodne pruvatne pravo”).*

In both languages, ‘Act’ is most commonly used in the legislative discourse, which can be viewed as a subdivision of the legal discourse. Legal acts are part of the legislation. Legal

acts are texts of legal documents, which are of primary importance for the successful development of any society. Both in the Ukrainian and Anglophone legislative discourses, the noun 'act' most frequently occurs in the titles of legislative documents. But in the Ukrainian legislative discourse the empowered authorities use the noun 'law' to entitle the act issued by Verkhovna Rada of Ukraine, while in the American legislative discourse, the Congress applies the noun 'act' which basically means law thus terminologic difference arises. E.g. *The President is permitted to veto specific legislative acts, but Congress has the authority to override presidential vetoes by two-thirds majorities (US Constitution, 1787)*. In the Ukrainian legislative discourse: *Президент України зупиняє дію актів Кабінету Міністрів України з мотивів невідповідності цій Конституції з одночасним зверненням до Конституційного Суду України щодо їх конституційності (Konstytutsia Ukrainy, 1996)*.

5. Conclusions

The noun 'act' was borrowed from Latin actūm, actūs and had a long history of its semantic structure development. Its origin was influenced by French, Green, Medieval English and within its development – by Polish in the Ukrainian language. Being registered first between the 11th and 14th centuries, 'act' was used in a sense of 'a thing done'. Throughout its history, the semantic structure of the noun 'act' developed thus modern Ukrainian and English dictionaries register a lot of senses which can be grouped round the following semes: 1) a thing done, a single thing someone does; 2) a document, a decree, a protocol, a law established by empowered body; 3) part of a performance. Modern English dictionaries also register the sense "a hidden behaviour, the behaviour that does not reveal your real feelings", while Ukrainian dictionaries provide the sense "a public ceremony, an official event".

The noun 'act' most commonly occurs in legal discourse where it can function in two senses: 1) a particular thing that somebody does; 2) a law that has been passed by the government. In the legislative discourse, which is considered to be a subtype of the legal the noun under study is used in the first sense. US Congress as a legislative body in the hierarchical system of the American society and Verkhovna Rada of Ukraine as a legislative body in Ukraine are viewed as social institutions, which generate legislative discourse. Verkhovna Rada of Ukraine establishes acts in the form of laws, which in the very names include the noun "law", e.g. Law of Ukraine "On International Commercial Arbitration, Law of Ukrain "About private international law", etc., while US Congress establishes laws, some of which in the very name include the noun "act", e.g. Immigration Act of 1952, Chinese Exclusion Act of 1882, etc).

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THEORETICAL AND METHODOLOGICAL ASPECTS OF THE PREVENTION OF DEVIANT BEHAVIOR IN YOUNGER ADOLESCENTS BY MEANS OF PHYSICAL EXERCISES

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Summary

This article substantiates physical culture as a means of preventing deviant behavior in adolescence. It has been proven that focusing on primary prevention allows for the correct formation of the personality, and allows for effective prevention of deviant behavior. For the prevention of deviant behavior, it is necessary to carry out the influence of strengthening mental health, personal development, social and moral improvement, as well as teaching correct behavioral attitudes. The general structure of the components, criteria and indicators of the normative behavior of younger adolescents is determined, on the basis of which deviant and socially acceptable behavior can be distinguished. In the structure of normative behavior, cognitive, emotional-value and activity-behavioral components are identified, in each of which criteria and indicators for assessing the levels of normative behavior of younger adolescents are determined, and types of normative behavior are determined. This structure allows diagnostics and control of preventive activities by means of physical culture.

Keywords: deviant behavior, adolescents, younger adolescents, prevention, physical culture, criteria and indicators.

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1. Introduction

The solution to the problem of preventing deviant behavior is posed at the national level and is defined in a number of state documents: the Law of Ukraine “On Education”, “On Child Protection”, “On Social Work with Families, Children and Youth”, the concept of preventive education of children and youth in the education system. In addition, in other comprehensive programs “Physical education – the health of the nation”, the Concept of physical education in the education system of Ukraine, which understands the education of a healthy person as a physical, mental and social person. Given that behavior is an external and internal response to the satisfaction of their biological, psychological and social needs, and therefore sometimes there is inappropriate action and behavior in the social environment. When performing actions that do not meet the expectations of social, moral, legal and behavioral norms, such a phenomenon appears as deviant behavior. This phenomenon should serve as a set of actions, which includes the formation of a full-fledged personality, with the existing ones not deformed by motives, needs, views and value orientations. The process of physical education has effective means and methods to address this issue.

2. Approach to the research problem

Deviant behavior of minors is one of the problems facing modern society. The solution of this problem at different stages of ontogenesis is devoted to a number of domestic and foreign pedagogical (A. Samoilov, A. Tovkanets, M. Mykytenko, L. Kanishevskaya, I. Taranenko), social and psychological (S. Revenko, V. Martyniuk, S. Dubinin) studies that play an important role in the prevention of various deviant manifestations are assigned in school, student and out-of-school education of young people.

In modern theoretical and experimental works in the correction, rehabilitation and education of deviant behavior in adolescents, special attention is focused on the process of physical education and the means of physical culture and sports. In Ukrainian works: a personality-oriented approach (*Taranenko, 2017*). In Russian scientific works: a differentiated approach to the correction of psychological states (*Maksimihina, 2006*), physical culture and health-improving activity (*Minnegaliev, 2004*), physical culture and sports activity of an applied orientation (*Tyulkevich, 2004*), social and pedagogical health technologies (*Zhukov, 2005*), pedagogical correction (*Novichkova, 2009*), education through play and competitive activity (*Gerasimova, 2009*). Foreign scientific works in the process of physical education: improving social and civic competence students (*Martinez, 2015*) and others. In these scientific works, mainly the influence is carried out on the correction and rehabilitation of deviant adolescents, but the analysis of the preventive effect as a means of preventing negative behavioral manifestations is insufficiently carried out.

Various kinds of scientific works within the framework of the process of physical education, influencing the formation of basic personality attitudes, such as the will and volitional regulation of A. Artyushenko, I. Dudnyk, the motives and motivation of D. Nechyporenko, personal development of L. Nechyporenko, the moral qualities of B. Shyian and which affect the education of healthy behavior and the formation of positive motivations, moral and volitional attitudes and value orientations, for adolescence is important enough to prevent deviant behavior.

Thus, the upbringing of a socially active, physically healthy person with positive moral, ethical qualities and rules of behavior is an important problem, which leads to a large amount of research on the focus on adolescent behavior. Therefore, the prevention of deviant behavior and its various manifestations is very important in modern society, especially in the school environment, in which young people are formed.

The purpose of the article is to scientifically substantiate physical culture as a means of preventing deviant behavior and to determine the general structure of components, criteria and indicators of normative behavior. According to which it is possible to determine the levels of manifestation of socially normative behavior and highlight socially acceptable and deviant behavior. According to the purpose, the research tasks are defined: 1. To study the state of the problem of deviant behavior in younger adolescents in pedagogical theory and practice, to determine the role of physical culture in the prevention of deviant behavior in younger adolescents. 2. Define and characterize the components, criteria and indicators of normative behavior and its level.

3. Materials and methods

To solve the problems of complex cognition of the subject of research, theoretical methods were used (analysis, comparison, classification and generalization of scientific provisions of psychological and pedagogical literature).

4. Substantiation of physical culture in the prevention of deviant behavior

Adolescence is the most critical period as it is characterized by rapid physical, cognitive and social changes. This period is filled with emotional instability, external and internal conflicts, psychological and physical changes, in which there are risks for deviant behavior.

According to A. Samoilov and A. Tovkanets, in the modern processes of transformation of Ukrainian society, a field opens up for the formation of deviant attitudes among young people. Social and legal not maturity, lack of experience of moral behavior, along with complex processes in society contribute to the formation of various forms of deviant behavior (Samoilov, 2017; Tovkanets, 2012).

According to L. Kanishevskaya, adolescence is the most difficult of all periods of a child's development. This is especially true of younger adolescence, which is characterized by the so-called "peak of curiosity", and a tendency to risky behavioral reactions of the type: grouping with peers, emancipation, feelings of protest, testing of psychoactive substances (Kanishevskaya, 2017: 4). All processes, along with the features that are characteristic of adolescence, form negative behavioral attitudes in adolescents. From the peculiarities of adolescence M. Mykytenko distinguishes: 1) adolescent ambivalence; 2) lack of forecasting functions; 3) striving for self-knowledge and self-examination; 4) instability of self-esteem; 5) underestimation of self-esteem; 6) insufficient formation of the value-motivational sphere; 7) instability of the emotional-volitional sphere; 8) imitation of authority figures; 9) features of character accentuation (Mykytenko, 2019: 46).

According to a number of scientists (Tyulkevich, 2004; Zhukov, 2005; Novichkova, 2009; Gerasimova, 2009), adolescence is not only a very difficult period in the formation of a personality, but also the most favorable for the formation of moral, value-orientational and individual attitudes. The constant growth of deviant behavior in adolescence, the negative impact on society, requires the search for effective forms, methods and technologies to solve this problem. In the scientific literature, it is mainly proposed to carry out efforts aimed both at the rehabilitation of deviant children and at preventing deviations from social norms, that is, at eliminating negative conditions that directly or indirectly affect negatively the behavior of children and adolescents. Therefore, in science and in practice, the main technology for preventing the formation of deviant behavior among children is mainly preventive.

Prevention is a complex of efforts aimed at timely prevention and correction of negative information, pedagogical, psychological and organizational factors that influence the formation of negative social and personal development of children and youth (Kanishevskaya, 2017: 32). According to S. Śliwa, prevention is divided into: 1) Universal, which is focused on all students of a certain age category, regardless of the level of manifestation of problem behavior. Aimed at creating a supportive and welcoming atmosphere, positive impact on mental health and self-esteem, motivation to achieve success. 2) Selective, which focuses on high-risk groups. Aimed at group and individual preventive measures (pedagogical therapy, teaching social skills, sociotherapy). 3) Indicative, targeted at high-risk individuals. Individual work by specialists in external institutions (Śliwa, 2015: 15-16).

The most effective prevention, in our opinion, is prevention, which is designed to prevent deviant manifestations, appropriate education and the formation of attitudes that will help shape the personality, can withstand external and internal challenges. In addition, as stated in a number of works (Zhukov, 2005), the higher the age of the individual, the more difficult it is to influence his already formed attitudes. So, preventive activities should be started when there is a formation of volitional, motivational, value-orientational, moral, social attitudes, namely in

early adolescence. Preventive activities need to be carried out for all children of this age category, because imitation is characteristic in this period, so this is best work in group actions. One of the means that can influence the formation of these structures is physical culture.

Physical culture in our time is known mainly as a discipline in the field of education in general education schools, which focuses on the practice of various physical and sports exercises, leads to the physical development of children based on motor skills or physical activity, thereby contributing to the education and development of young people. But physical culture has many positive aspects. B. Shyian believes that physical culture has a wide range of opportunities for moral education of adolescents. The upbringing of moral consciousness and behavior consists in addressing the spiritual essence of students (*Shyian, 2000: 42-43*). According to the WHO, regular physical activity during adolescence, in addition to developing motor skills, helps prevent and control feelings of anxiety and depression. Involvement in properly controlled physical activity and sports can promote the adoption of healthy behaviors, including quitting smoking, alcohol and drug use, and all kinds of violent behavior (*World Health Organization, 2003: 3*).

In general, physical activity has a positive effect on the development of children and adolescents, in addition to physical development, the effect is carried out on the psycho-emotional state – by improving memory, well-being teaches how to cope with fatigue and stress, has a positive effect on learning progress (assessments, behavior, concentration of attention), reduces the level of anxiety, reduces depression. Social status is also positively influenced – relations with others are formed, contributes to the creation of positive behavior within the framework of the idea of “fair play”, teaches to win and lose, to learn cooperation, self-control, and can also be a good way to spend time with peers (*Mazur at al., 2013: 11-12*).

Modern scientists (*Nechyporenko, 2016; Maslou, 1999; Ilin, 2000*) increasingly associate people's behavior with their motivation. Motivation of human behavior can be based either on their internal motives and needs, or mainly on external impulses, the so-called stimuli. Needs and incentives are the main sources of human motivation. For adolescents, as well as for adults, according to A. Maslow, needs are the driving force behind motivation. In addition to the basic needs (physiological, safety), the following are also important: the need for self-realization (realization of one's own capabilities, in victory, in success) the need for respect and recognition (recognition of merit) social needs (the need for belonging, love, communication with people, existence of friends) (*Maslou, 1999: 92-93*). That is why needs are a powerful engine for taking action.

In childhood and adolescence, different needs begin to form. Thus, F. Talebzadeh asserts that physical culture and sports help adolescents to solve some of their needs: 1) in a healthy and strong body; 2) in activity and energy discharge; 3) in emotional balance; 4) in solving personal and family problems; 5) in the assimilation of the principles and rules of social life; 6) the need to understand personal values; 7) in the need to receive respect and gratitude; 8) in identifying external and internal talents (*Talebzadeh, 2012: 1613*). Therefore, when educating a person, you need to help in realizing their needs, help in the formation of adequate motivational attitudes.

In general, scientists argue that physical culture can influence the formation of personal skills that affect the behavior of children and adolescents. D. Nechyporenko determines that the set of certain motives that shape human behavior (*Nechyporenko, 2016: 12*). L. Nechyporenko claims that the motivational and emotional attitude to the process of physical education has a positive effect on behavior, both during classes and outside them (*Nechyporenko, 2009: 92*). Promoting motivation, according to these authors, should help in the formation of correct motivational attitudes towards positive behavior.

Along with the motivational structure in the process of physical education, it is possible to influence the volitional categories of the personality. I. Dudnyk argues that volitional processes form the ability to act and act on the basis of conscious motives (*Dudnyk et al., 2014: 4*). A. Artyushenko determines that with the help of volitional regulation, conscious regulation of behavior and activity is carried out (*Artiushenko, 2011: 5-6*). With the help of volitional processes and volitional regulation, there is a conscious control of one's behavior in order to achieve one's own motives, which means that resistance to the manifestation of deviant behavior may arise.

I. Taranenko argues that adequate acceptance of social value orientations leads to variability in the nature of the norms and rules of the individual's behavior (*Taranenko, 2017: 10-11*). When forming positive value orientations, a socially acceptable choice of needs and goals occurs, and on the basis of motives and volitional efforts, they are realized. These qualities help to control their own behavior and the consequences of their own behavior. Adolescents who have a sufficient level of their own self-control, have the skills, the ability to observe control over their own behavior, have significant resistance to environmental influences.

Therefore, it can be argued that during the formation of volitional qualities, positive motivations, moral and volitional categories and value orientations in the process of physical education, the character of a person is formed, which is able to withstand the influences of the external and internal environment, as well as to control his actions and behavior. Therefore, an increase in personal development in children and adolescents contributes to the development of resistance to the negative influences of the external and internal environment.

In general, physical culture and sports are an important component in the upbringing of adolescents, in the formation of their social norms and attitudes, the acquisition of knowledge about a healthy lifestyle, as well as in the upbringing and prevention of deviant behavior. The preventive approach by means of physical culture is to create special conditions in which moral-volitional and social qualities, positive motivational attitudes and corresponding value orientations will be formed, which will allow to form a strong personality, surrendered to resist external and internal factors of the environment, and be a means of preventing deviant behavior.

5. Determination of components, criteria and indicators of deviant behavior

In order to determine the tendency to deviant behavior, we need to determine the structure of normative behavior, according to the levels of which we can determine socially acceptable behavior and deviant behavior in adolescents in the process of physical education. Analysis of the literature on deviant behavior shows that deviant behavior is an interdisciplinary component of behavior, indicating its personality manifestations. It can manifest itself in one social environment, but not in another. Therefore, the definition should cover general diagnostics, which should take into account both activities in the process of physical education and beyond.

According to the analysis of literary sources (*Samoilov, 2017; Dudnyk, 2014; Nechyporenko, 2016; Petrovska, 2011*), the general structure of the implementation of behavior is: a cognitive component (knowledge, understanding and awareness), an emotional-value component (emotions, motivation, value orientation), activity-behavioral (activity, activity, behavior). In addition, this content structure represents the interconnection of components with each other and their logical sequence, which can be depicted in the formula "I understand → I want → Action". The very general structure of normative behavior is shown in Fig. 1.

Without a full level of knowledge, insufficient understanding of the features of normative behavior and awareness of the importance of the manifestation of this behavior, there is a

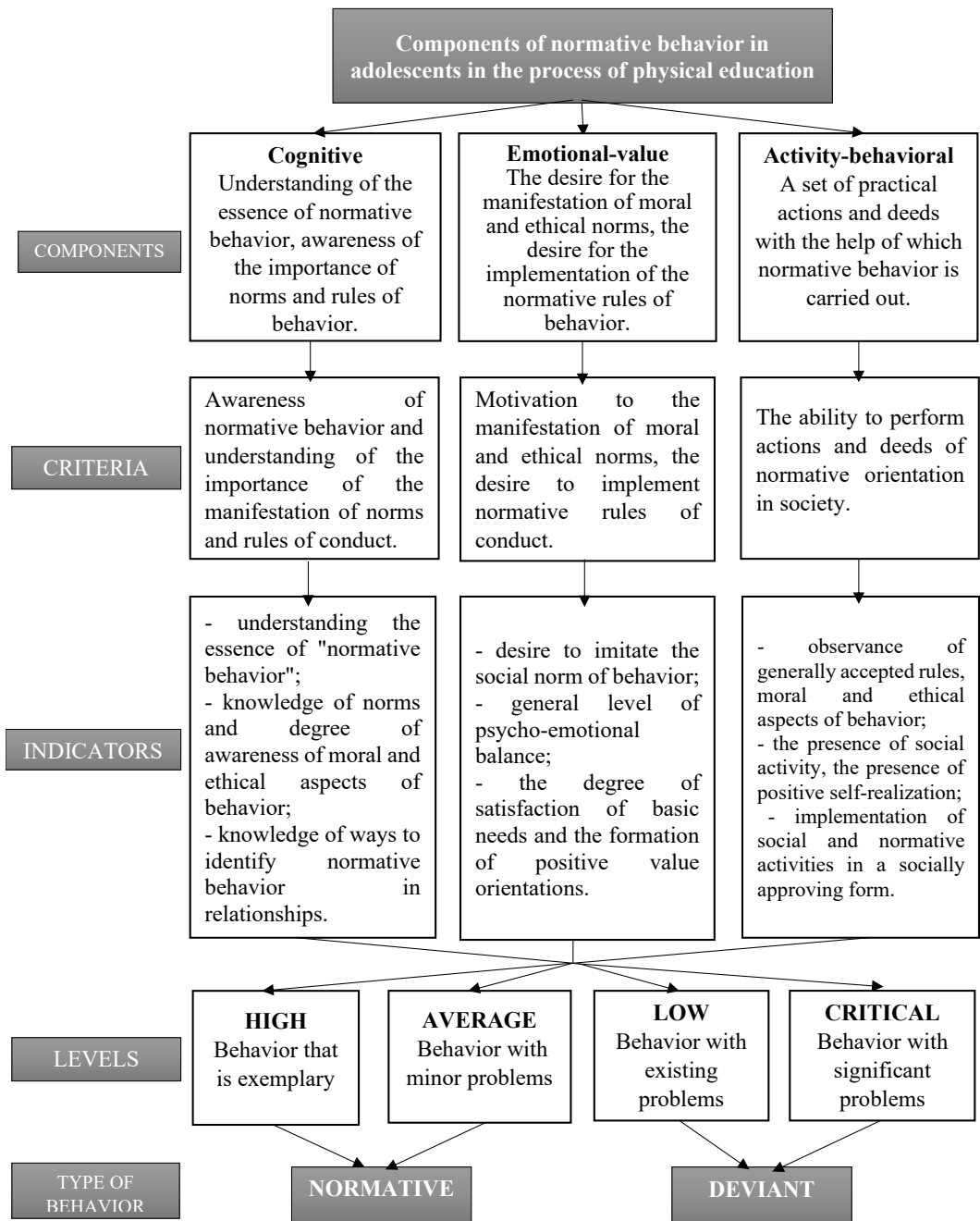


Fig. 1. General structure of normative behavior in adolescents in the process of physical education

negative emotional reinforcement, the establishment of negative motivations to meet personal needs, an installation on negative value orientations and further manifestation of actions and deeds that are deviant.

According to a certain structure of normative behavior, it is possible to carry out diagnostics and, accordingly, this structure of criteria and indicators, it is possible to determine the dynamics of the effectiveness of prevention of deviant behavior in adolescents by means of physical culture.

The cognitive component was manifested in the system of knowledge of the essence of normative behavior, awareness of the importance of norms and rules of behavior. As a criterion for this component, we determined awareness of normative behavior, and the importance of manifestation of norms and rules of behavior. We have chosen as indicators: understanding of the essence of normative behavior; knowledge of norms and the degree of awareness of the moral and ethical aspects of behavior; knowledge about ways to identify normative behavior in relationships.

The emotional-value component reflects the desire to manifest moral and ethical norms, the desire to implement the normative rules of behavior. The criterion of this component is determined by the motivation for the manifestation of moral and ethical norms, the desire to implement the normative rules of behavior. We have chosen as indicators: the desire to imitate the social norm of behavior; general level of psycho-emotional balance; satisfaction of basic needs and the formation of positive value orientations.

The activity-behavioral component reflects the totality of practical actions and deeds with the help of which normative behavior is carried out. The criterion for this component is determined by the ability to manifest actions and deeds of a normative orientation in society. We have chosen as indicators: observance of generally accepted rules; moral and ethical aspects of behavior; the presence of social activity; the presence of positive self-realization; implementation of social and normative activities in a socially approving form.

Based on these indicators, four levels of normative behavior are determined: high, medium, low and critical. Based on the levels, the type of behavior is determined: acceptable, deviant.

Thus, the general structure we have defined is a methodology for diagnosing the level of formation of normative behavior in adolescents, for preventive activities by means of physical culture.

6. Conclusions

1. A generalizing analysis of scientific sources has shown that physical culture has effective means for the prevention of deviant behavior in adolescence. The most effective prevention is primary prevention, which is carried out within the framework of prevention, effective education and upbringing of individual, moral and social qualities, not only realizes and adheres to socially acceptable behavior, but also resists external and internal factors that contribute to the formation of deviant behavior.

2. According to the theoretical analysis of the literature on the topic of human behavior, it is possible to single out the general structure of normative behavior, which will determine the socially acceptable and deviant behavior. We have identified a number of the following components: cognitive, emotional-value and activity-behavioral. Each of these components has its own criteria and indicators, as well as levels that determine the type of behavior.

In the future, preventive activities can be carried out with the help of specially designed pedagogical conditions by means of physical culture.

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DIFFERENTIAL GENDER APPROACH FOR GIRLS OF THE AGE OF 12-15 IN THE PROCESS OF BOXING TRAINING

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Summary

The article presents the substantiation of the differential gender approach to the training for the girls of the age of 12-15 years in boxing. *Methods.* Theoretical analysis of special and scientific literature, generalization of data. *Results.* Several sides of Boxing preparation in general are considered. The physiological features of the female organism and the level of influence of certain phases of the menstrual cycle in training and competitive activities, sensitive periods of development of physical qualities and capabilities of girls contribute to the training and improvement of physical exercises in training are studied. The difference was detected: in the volume of training loads for boxers' girls of 12 years old compared to girls-boxers of 15, in methods of teaching technical and tactical training of girls of 12-15 years old compared to men and boys boxers. The interconnection of various aspects of preparing girls in boxing is determined. A differential gender approach to girls training is offered. *Conclusion.* The results of the completed theoretical analysis revealed ways of effective education, improving technical and tactical training of girls of 12-15 years old dealing with boxing which should be noticed in effective performances at competitions of different rank. The actual directions of combination and increase in the volume of theoretical preparation with psychological in the training process were revealed. Differential exercise by age. Variation of means of training when mastering and improving tactical, technical education directly with a partner in pairs or in a training fight. In the long run, with this approach it is possible to create a well-grounded (with a clear distribution of training load) a conceptual model of training, which involves harmonious training of girls engaged in boxing.

Keywords: Virgin Boxing, Boxing Preparation, Boxing Workout, Girl Workout, Pedagogical Approach, Integrated Approach.

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1. Introduction

In connection with the rapid development of women's boxing in the world, an increase in classification competitions at the international level, international tournaments and joint educational training fees, increased the number of competitions within the country, which contributed to the popularization of this sport among girls and more attention from sports functionaries. Thus, the issue of the development of the youngest age groups of female boxing in order to prepare the reserve in the future and strengthening the international image of Ukraine as a "boxing state" in competitions of these age groups in the future.

Unfortunately, the small amount of scientific and special literature on boxing dedicated to the training of younger age groups complicates this process. Therefore, trainers working with this age group are guided by methodological developments in other sports in which the preparation of girls of this age already has certain levels: athletics, tennis, judo wrestling, gaming types, art and sports gymnastics, acrobatics, and cycling sports. Use templates for technical and tactical training in boxing, which are inherent in the training of boys, highly skilled men and women boxers.

The purpose of the study: to substantiate theoretically the expediency of training with the help of a differential gender approach for girls of 12-15 years old in boxing.

Material & methods. To find out the problem field of the selected topic, the determination of the object, subject, the purpose and substantiation of the results used the method of the theoretical analysis of special and scientific literature, the Internet, generalization of data.

Implementation of this method was carried out by analyzing and generalizing the data of scientific literature and experience in domestic and foreign practices on the preparation of athletes, regardless of sex in various sports and boxing. The study and generalization of scientific literature on the subject of the article was carried out according to educational and methodical manuals, scientific articles of professional scientific journals, materials of conferences, dissertation and dissertation robots, leading scientific Internet resources.

2. Theoretical analysis of scientific literature

Studied the scientific works of various periods of leading trainers, scholars, trainers of team teams of different countries Cokes & Kayser (1980), Radko, Bielykh, Iusov, Sternikova & Vorobiov (2003), Driscoll (2008), Edwards (2008), Ostyanov (2011), Lisicyn (2014), Gasanova (2014) the author of the article determined that in technical and tactical training in male and female boxing there is a certain component: a sequence of teaching techniques of strikes, movements, protective actions and fundamental teaching methods. Although in teaching the technique of the sequence of impacts there are certain differences, for example, after learning jabs, some coaches recommend teaching hooks, and then uppercuts. Also, trainers' views may vary in the distribution of priorities in learning, for example, focus on attacking actions and then pay attention to learning and improving defensive actions. However, on the technique of execution of strikes and defensive actions and special moving, according to the authors of the article, such an algorithm does not affect. The differences of approaches in training depends on the boxing traditions inherent in one or another country, modern trends in sport and changing of rules in boxing.

Domestic and foreign scholars, specialists in women's boxing Chatterjee, Banerjee, MajumDar & Chatterjee P. (2006), Gasanova (2015), Saktaganova (2015), pay attention to what has a little studied physiological and psychological side of female boxing, so transporting training Templates from a male training program without taking into account a physiological and psychological component, in a women's training program is invalid (*Ryasnaya, Shevchenko A. & Shevchenko I, 2014; Gasanova, 2015*).

Scientists who work with athlete women for decades prove that the phase of the menstrual cycle (MC) affects not only the training process, also on the indicators of sports outcome and behaviour during training and competitions. For premenstrual, ovulatory and menstrual phases, MC is characterized by a decrease in the speed of the latent period of a simple visual-motor reaction and complex visual-motor reactions, reducing the rate of change in the processes of excitation and braking in the central nervous system (*Shakhlina & Chistyakova, 2020*).

Mark the smallest efficiency of blood circulation and the use of energy resources of the body with physical activity, slowing down of motor reaction, reduction of strength, endurance, increasing mobility in joints and stretching of the ligament apparatus. Sweating in physical activity begins earlier, which is reflected in the sensitivity to increase ambient temperatures. Adaptation to physical activity is more stressful, and the restorative period will be stretched (*Shakhlina, 1999*). Examined 974 athletes in various types of sports in particular in acyclic sports, proved that in the face phase, the effectiveness of training a number and is from 43.5% to 80.3%, depending on the sport, with the exception of artistic gymnastics in which the efficiency was 80.5 %. The high performance in the competition among the investigations was not found among the representatives of acyclic sports, the smallest gap between the high and low result in the indicators was 6% towards a low result in representatives from Freestyle and 7.6% of basketball representatives. In other sports, the difference in the direction of low result in phases of MC amounted to 30.4 (hockey on the grass) to 100% (modern pipeborne) (*Shakhlina & Kovalchuk, 2018*).

The data of specialists in sports medicine claims to influence the MP phases to lateral asymmetry, which will negatively affect the level of assimilation of coordination exercises and on the level of functional asymmetry in general, although according to specialists in psychophysiology in women in general, a small difference in manual asymmetry compared with men (*Vorontsov, 2020: 14-19*).

Scientists prove that women in certain periods of MC are more difficult to solve spatial tasks (*Bendas, 2006*). Prone to raising the level of anxiety, inattention (*Armento et al., 2021*). Prone to risk increasing lower extremity injuries than boys at all (*Lehnert et al., 2020*), and in certain phases IC, this risk increases (*Lee & Petrofsky, 2018*).

Therefore, experts recommend to correct the amount of recovery tools that should be 25% more than men depending on the personality and cyclic load changes to prevent such cases. However, it is possible to prevent such cases by differentiation by means and methods of physical training (*Nerobeev, 2014*).

That is, these data, according to the authors of the article, certify the integral influence of the phases of the biological cycle of the female body in training. Therefore, they need a coach of competence in the educational process when training women's gender.

According to the research due to a differential gender approach in which the MC phases were taken into account, the level of successful performance on competitions in various sports such as basketball, treadmills athletics and jumps, in the female gender due to the use of this method increased from 30% to 56%, depending on gender type and kind of sport (*Shevchenko, 2014*). Also, due to this method, indicators of special physical training of volleyball players increased depending on the gender type (*Artamonova & Shevchenko, 2016*).

Other scientists working with highly skilled women in various sports including the martial arts argue that a differentiated gender approach depends on the typological features of a woman athlete and such personalities can train by a male program without account phases MC (*Nerobeev, 2014; Artamonova & Shevchenko, 2014; Kostyuchenko, Vrublevskij & Kozhedub, 2017*).

Observed by the authors of the article scientific works of leading specialists in the field of sports medicine, coaches work with women athlete Soboleva & Sobolev (2013), Bugaevskij (2017), Bugaevskij (2017), Tarasevych & Mulik (2020), and others, in which it has been proved that the different gender type of personality are capable to react on different ways to physiological mental and physical activity, determined that various sports activities, sports experience affect the formation of gender identity of athletes. Scientists determine the following

gender types: masculins, androgins, femines. Qualities that make up masculinity content in sports: activity, independence, independence, courage, assertiveness, perseverance, manifestation of will, ability to resist hardship, ability to achieve the goals, readiness for risk, with high self-esteem and self-oriented success. Sports doctors and specialists in various types of sports and women's boxing determine that in this type is increased concentration of androgens, which positively affects the development of physical qualities such as the stroke of movements, speed, endurance. In the psychophysiological plan will be manifested in underestimation of anxiety and an adequate response to stress. Testosterone will help improve different types of memory, spark orientation, concentration of attention. According to experts, the versatility of the androgine type in various sports is in a manifestation in case of necessity of feminine and masculine characteristics of character (situational flexibility, ability to centering their interests as necessary), better adaptation to new conditions, interpersonal contacts in the team. The feminine type includes properties such as passivity, softness, care, emotionality, sensitivity, shyness, readiness to help, compliance, sensitivity, tenderness, ability to compassion and empathy (Vorontsov, 2020: 95-101).

According to empirical studies on various sports in particular in sports martial arts, the bulk of the athletes consists of androgenic and masculine gender representatives (Burdzicka-Wolowik, 2012; Burdzicka-Wolowik & Goral-Radziszewska, 2014; Tarasevich & Kamaev, 2019; Bojkowski & Kalinowski, 2014; 2019; Vorontsov, 2020: 95-101).

According to physiologists, according to the number of muscle fibers, women are not inferior to men, but women are inferior to the thickness of muscle fibers, if they are engaged in a single sport and have approximately the same qualifications with men. The presence of slow fibers in muscles in women is approximately the same with men. Indicate that arbitrary maximum muscle strength to the puberty period is the average of girls and boys, but after 12-14 years old in the girls are smaller. Training of muscle strength ie ability to increase muscle strength under the influence of directed power training in women relatively less. Most noticeable in 16-30 years, less it is noticeable in 12-14 years, which indirectly indicates the important role of androgens in the development of muscle strength. The concentration of lactic acid after maximum aerobic work in women is smaller (Kots, 1998).

According to scientists in experiments associated with elevation, women are able to carry out the same power tasks as men, but with a certain kind of technical execution (Lindbeck & Kjellberg, 2000).

Specialists of Blagrove et al., (2018) Recommend for teens – girls Moderate loads in order to prevent injury and increase of power qualities when training 2-3 times a week with a progressive load by 5-10% for 10 weeks.

According to the authors, the differential gender approach becomes relevant not only in between sex groups, but also in age groups of female boxing. Consequently, these data allow us to conclude about the influence of the physiological formation of the maiden organism and sporting experience on the quality of preparation in this sport.

Scientists determined the level of stabilization of the basic physiological systems of the maiden's body, the development of physical qualities, which accounts for 15 years, depending on the individual necessary to increase the physical activity of training, digestion and improvement of special motor operations in Boxing (Lisicyn, 2014: 65; Konokh & Vorontsov, 2019: 232-238). That is, increased physical activity in order to develop muscle strength, anaerobic loads are expedient from this age.

The researcher determines that the increased volume of general physical activity for girls can be 8 years, 11 years, 15 years and older. In other ages, small and middle (Volkov, 1981: 69).

The authors of the article states that sensitive periods of physical qualities make coaches to change the approaches and more individualize it, because certain physical qualities that are needed to master the physical exercises and skills development can be lost.

The empirical data of leading scholars analyzed by the authors allowed to assume that such qualities as the power dynamic endurance of the flexors of the body, the power dynamic endurance of the trunk extensor, the static endurance of the shoulder flexors, loses development in accordance with 13, 12, 11 years. The speed of response to simple and complex situations develops up to 14 years, construction of motor activities and dynamic equilibrium finish developing in 13 years, static equilibrium develops up to 14 years, the accuracy of the single movement stops developing in 12 years. The highest development of the rate of movement of the lower extremities ends in 11 years, but evenly high level of growth is observed in 15-16 years. The level of change in the degrees in the joints when moving the body in space directly in the shoulder and elbow, better changes to 12 years. Undoubtedly, in the opinion of the authors of the article, especially when adjusting the techniques of performing lateral and strikes from below from 45-120 degrees. Also, scientists pay special attention to the age of 11-13 years in girls in which it is necessary to work purposefully on the development of the reaction to 12 years, also in these years, the maximum growth of bones of the pelvis 12-13 years, the completion of the development of a motor analyzer 11-12 years old which contributes to the thin differences in the temporary and spatial characteristics of movement, which helps to better and more rapid assimilation of motor skills and assimilation of wavy displacement of the body in space from 11-12 years. The study of scientists in complicated coordination from 7-8 years to 12-13 years has proven that the interest assimilation of physical exercises in children greatly increases, after it remains in place (Konokh & Vorontsov, 2019: 115-119; Vorontsov, 2019: 35-48).

That is copying the training process of highly skilled women-boxers is not relevant for maiden boxing. Since the preparation of girls is complicated by the fact that studying in basic training groups accounted for a puberty period in which physical training will have to train adult women – boxers, there are also certain differences in the volume of training load, according to the physiological purpose of training, the complexity of technical elements.

Scientists from sports psychology are drawn to the significance and multivectoral psychological training. Scientists show that today in a highly skilled sport level of physical activity, functionality, record indicators practically achieved its boundaries and require a more detailed study of the psychological component to increase skills and skills. (Vysochina & Vorobiova, 2019). Attention is drawn to the detection in the initial stages of many years of training of certain psychological differences in personality that directly affect to the level of mastering and improvement of physical exercises. In the training process, when performing technical exercise, monotony develops faster in representatives with a “strong” nervous system. Representatives with “weak” nervous system show a high density in the first part of the class or task. Individuals with a “strong” nervous system and the inertia of the nervous processes are better conducting “ends” of tasks. Representatives with the “weak” nervous system and the mobility of the nervous processes are better “enter” in physical work, but the “end” of the task is spoiled. The time of complex reaction is the smallest in representatives with the “weak” and “strong” types of the nervous system. Physical quality as endurance – may be the same in individuals with a “strong” and “weak” nervous system. Load on training with small and medium intensity increases the efficiency in all individuals with different types of nervous system. At the stage of representation of the molding of the motor skills of individuals with weak type of nervous system and the average degree of mobility of excitation is more successful in mastering such movements. At the stage of improvement, the initiality of memorization of physical exercises is

better in athletes with the inertia of nervous processes. And in capturing at the tempo of study in individuals with lability and mobility of nervous processes. Subsequently, inert athletes are compared as skills with athletes of mobile nerve processes. It is noted that when breaks in training classes are better maintained in inert athletes (*Ilin, 2008*).

According to the tactics in the sport of individuals with a weak nervous system and moving nervous processes are inherent in protective and counterattacking actions. Attacking style is more suitable for individuals with a strong nervous system and the inertia of the excitation of nervous processes. Athletes with a weak nervous system are effective in the role of “fleeing”, and athletes with a strong nervous system in the role that is recovered with treadmills and mobile games (*Ilin, 2008; Radionov & Radionov, 2013*).

Scientists point out the destruction of psychological conditioning in women in comparison with men in the training process in general (*Bendas, 2006; Lisitsin, 2014*).

Sports psychologists focus on an important component in preparing women boxers, such as aesthetic pleasure from the training process, generally mark high social activity (*Predelskaya, 2015*).

On the example of the female boxing team of Kazakhstan a scientist emphasizes the significance of balanced mental and physical training, ability to manage a stressful situation during competitions and training periods. Insists on accompanied by a psychologist at all stages of workout, because a negative psychological mood – the main reason for an unsuccessful performance in competitions even in highly skilled athletes. Attention is drawn to a small number of psychological training in an annual training plan, according to its data, such training occupies only 10% (*Saktaganova, 2018*).

Head coach of the Female National RF 2003-2017, Scientist V.V. Lisitsin believes that one of the priority directions should be considered in the training of Boxing School Boxers, where technical and tactical training is associated with physical and psychological. It prevents the inadmissibility of the frequency of matches in female boxers compared to the battles in men-boxers, since they negatively act on the nervous system, which can lead to a refusal to speech (*Lisitsyn, 2014: 94 – 126, 189*).

A significant number of scientists focus on the theoretical component in the training of boxers. Of course, such training assumes a certain intelligence and abilities.

Scientists have proven intellectual advantage of women engaged in acyclic sports over women cyclic sports and women who do not engage in sports in general (*Pacesova, Smela & Nemcek, 2020*).

Studies prove the benefits of girls 14-15 years of arbitrary attention that are focused on speed (according to the scope, stability and distribution of attention) (*Ilin, 2002*).

The advantage of template, memorization with the help of vision (9-12 years) and on hearing, content memory (12-14 years). The dominant verbal and election memory with the name of the subject (*Bendas, 2006*) is to have a tendency to more memorable materials painted in pictures with a description of the action. What, according to the authors of the article, implements the application of project tests in the theoretical training of the Boxing Tactics of this age group.

According to these researchers, the theoretical component at the stage of basic preparation raises interest in athletes on the following topics: “Varieties and content of tactical techniques and actions” and “Strategy and Tactics of Competitive Activity”. According to trainees from martial arts, the appropriateness of the theory lies in the ability to develop tactical thinking of its practical application. In order to assimilate the above-mentioned material, according to experts, the following verbal methods: Analysis and Discussion, Guidelines and Recommendations,

Videos should be used. In practical methods: workout with a partner and conditional rival (*Zadorozhna, Briskin, Sosnovskyy, Romanyuk & Ryhal, 2019: 46-51; Zadorozhna, Briskin, Pityn, Perederiy & Neroda, 2020: 71 -85*).

3. Discussion and recommendations

As you can see from the aforementioned boxing preparation, it consists of several directions that are interconnected and necessary for a rational training process.

Having considered means and methods of technical and tactical training in boxing in sources written above and relying on its own practical experience, author was concluded that the main means and methods of female TTP practically do not differ from male. Of course, the methods of training and improvement have suffered certain innovative changes, such as training special technical and tactical exercises using an active video game (AVG), virtual reality simulators (*Aygün & Çakır-Atabek Hayriye, 2018; Balko Heidler & Edl T., 2018; Akbas et al., 2019*). However, the main means of the TTP remain “Boxing School”, working with a partner in a pair (working out tasks), sparring with different styles of rival in conditional and free battles. These means, according to the authors of the article, can be used in the training of girls in this age group, but with a certain differentiation. For example, reduce the volume of free battles for girls and young people when working in a pair compared to boys, but to give a larger share of conditional battles with a certain task, more often change the tasks, providing tasks depending on the somatotype (weight category). However, to proceed to training classes that to study and improve the technical and tactical skill of girls in this age group with the help of these major Boxes, according to the authors, requires various methodological ways.

In certain phases MC should be avoided larger in terms of physical activity aimed at developing force, endurance, speed. This approach, in the opinion of the authors, will not violate power training in a weekly microcycle as data provided (*Barbalho et al., 2019*) indicates that the development of power qualities in women can grow even when training once on Sunday with 10 approaches in the 24 weeks. Exercises associated with jumps in different variants should be taken from a training program. The selection of encumbrances for training in these phases should be minimal because mobility in the joints and reducing the strength of the skeleton bones can lead to injuries, especially lower extremities.

In the training and improvement of technical and tactical training in certain phases IC it is advisable to reduce the training of new high coordination exercises are particularly related to functional asymmetry. The role of the visual analyzer is weak and appropriate to use auditory modality with various types of sensory signals: cotton, pivot, conditional slang coach, Danes of specialists Benešová & Švátora (2018). In a psychological plan, a decrease in the training of emotional tension, and an increase in the use of autogenous training methods. Involvement in the planning of the training process of athletes, solving issues regarding the selection of training exercises with the help of creative tasks during and outside the training process.

In theoretical training in phases MC, the expediency of using conversation methods, project tests, educational films.

In other phases, power loads for girls 12-13 years are possible at the level with guys this year, because the power potential is practically the same. But with differentiation by the number of repetitions in exercise and approaches. By the volume of training load, such physical work can be enlarged for girls in 15 years.

In the technical and tactical plan, in connection with the already formed motor analyzer, which will be in 12-13 years in girls, the expediency of learning the assembly of difficult

coordination movements. That is, it is possible to improve the series of 3 and more strikes, as well as repeated attacks with the same amount of strikes. Taking into account the speed of the legs in this period in girls, a greater propensity to mastering stereotyped movements and a small manual asymmetry technical and tactical arsenal of boxers will be further supplemented. For example: the transition from attack to active protection with impacts and the subsequent transition to a counter attack requires a boxer application of four and more strikes. That requires high coordination boxer, the accuracy of the movement of the legs, a sense of space that is possible for the maturity of the motor analyzer.

Also, when studying asymmetric exercises, specialists recommend training from the dominant side in 15 years, and from the leader of 12.5-13.5 years (Vorontsov, 2020:14-19).

Theoretical training should be carried out in breaks between training tasks and evaluate the level of execution with video shooting directly after the training exercise.

4. Conclusions

The results of the completed theoretical analysis revealed ways of effective education, improving technical and tactical training in girls 12-15 years dealing with boxing. Which should manifest themselves in productive speeches in competitions of different rank.

The actual directions of combination and increase in the volume of theoretical preparation with psychological in the training process were revealed. Differential exercise by age. Variation of learning tools when mastering and improving tactical, technical training directly with a partner in pairs or in a training fight.

In the long perspective, with this approach it is possible to create a well-grounded (with a clear distribution of training load) a conceptual model of training, which involves harmonious training of girls engaged in boxing.

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ASSOCIATIVE CONCEPTUAL CONSTANT OF SUBCONCEPTS E-SPACE AND CYBERSPACE

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Summary

The article presents the part of results of a mixed free and directed associative experiment for the study of nominations of concepts E-ПРОСТІР (E-SPACE) and КІБЕРПРОСТІР (CYBERSPACE) of the conceptual field “простір (space)” in the online mode. The purpose of the associative experiment is to confirm or refute the hypothesis that E-SPACE and CYBERSPACE are identical subconcepts of CF «простір». The article presents the reasons for choosing an associative experiment and the methodology of the experiment. The material of the research was 86 questionnaires of Ukrainian-, English- and Russian-speaking respondents who are carriers or mediators of the Ukrainian conceptual picture of the world and 955 reactions were collected. On the basis of free and directed answers, the respondents' reactions to the E-ПРОСТІР and КІБЕРПРОСТІР stimulus, the nominative field of two concepts was singled out, and 7 microfields of the E-ПРОСТІР verbalization and 6 microfields of the КІБЕРПРОСТІР nomination were singled out. The top list of tokens of verbalizations of the concepts is presented in the article. The common conceptual constant based on the associative field of both concepts, and the status of subconcepts of the conceptual field «простір» was confirmed.

Keywords: information, reactions, tokens-representatives, conceptual field, picture of the world, logosphere, language personality, top-list.

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1. Introduction

In recent decades, new cells, sizes, and environments in the space have appeared that change the way we think about space. Outer space, the Internet, virtual reality are abstract dimensions limited only by human perception. Personal experience of spatial relations is changing and needs to be restored. Information, as a physical and philosophical concept, a measure of the heterogeneity of the distribution of matter and energy in space and time, a measure of change that accompanies all processes occurring in the world (*Glushkov, 1986*) is a key agent of change in spatial experience. “*Forget Space-Time: Information May Create the Cosmos*”: information is both a mean and a fixer of change in the world (*Kuhn, 2015*), just as language is. Physicists use numbers to describe space, and programmers use the same numbers as language to create and actualize it.

The philosophical category of space for division and cognition of the world has undergone conceptual changes. Human used to structure space through information about his location, and now, as a continuation of himself, human has placed information about himself in a container – electronic space. Various nominations have become established in the language of speakers: electronic space (S. Sassen, K. Robins, M. Hepworth, etc.), cyberspace (W. Gibson, S.B. Barnes, M. Benedikt, etc.). The question arises: what is the difference between these two cells of space? Whether they are two concepts that have something in common with SPACE or not and what is the difference between them we want to define with the help of verbalizations of these concepts. Thus, the relevance of the study is in the need to establish conceptual boundaries, common ideas about new concepts, to establish their cognitive relationship to the category of space represented in language in the form of the concept “SPACE” and the conceptual field around it.

2. Literature review

Space exists where we know about it. The rest has not been proven. Thus, as K. Popper said, the fact that we have not seen a black swan does not mean that it does not exist, and by claiming that it does not exist, we contradict the existence of those swans that are recorded (*Popper, 1959: 111, 378, 404*). However, we will not be able to describe the black swan until we see it (empirical experience). Therefore, that hypothetical space beyond the planets we have reached and described is a hypothetical space. Therefore, the emergence of information space is caused by the desire to capture the space under human control.

Our *hypothesis* is that in the national Ukrainian logosphere of being, E-space is identical to cyberspace. To prove that, we firstly studied previous linguistics researches. As Frege said in his theory of language sign: “*The regular connexion between a sign, its sense, and its reference is of such a kind that to the sign there corresponds a definite sense and to that in turn a definite reference, while to a given reference (an object) there does not belong only a single sign*” (*Frege, 1952: 24*). We aim to find in the concepts E-ПРОСТІР and КІБЕРПРОСТІР the invariable essence, the common meaning of two different signs, a *conceptual constant* that we define as 1) as a common unshakable semantic base of the concept which remains in the variation of the names of the concept within one linguistic picture of the world; 2) the point of cultures contact, common denotation, fixed representation, the meaning of the concept common to the same concept within different linguistic pictures of the world, which is expressed in language by a token or tokens and reproduced in other comparable linguistic pictures of the world.

All the variety of verbalizations of the concepts of E-ПРОСТІР and КІБЕРПРОСТІР will help us to establish such a constant. Reactions to e-space and cyberspace are embodied in the form of language, ie verbalized reactions, emotions, have the opportunity to establish the experience of the speaker in relation to the studied phenomena. Such reactions “*are caused by the previous experience and due to them, one idea that appears in the mind causes new ideas on the basis of similarity, contiguity or opposite*” (*Klimkova, 1991: 45*) and are called *associations*. Telia considers three types of associations: national-cultural, which are inherent in the bearers of a certain ethnolinguistic culture; general cultural, which are universal for speakers of different languages; and individual-authorial, or subjective (*Telia, 1986: 91*). As part of the study of CF “space” by exploring all the possible types of the associations around the sub-concept of E-ПРОСТІР, КІБЕРПРОСТІР, we will be able to establish a separate associative field inside the CF “space”. An associative field (associative group) is a set of words associated in a person's mind with a word (*Bilodid, 1980: 298*).

The study of the connection between language and digitalization (*Makhachashvili, Semenist 2020: 196*), about the role of associations in concept shaping (*Vorobyova, 2013; Prikhodko, 2013*) and in concept dynamics (*Dzyubenko, 2013; Surmach, 2012*) were conducted before. The study of the connection between the concept, digitalization and associative linguistic experiment study is poorly presented in linguistic research (*Klyuyev, 2020; Agagyulova, 2012*) and need further deep development.

Based on the ethnolinguistic relativity “Humboldt – Sepir – Wharf”, we consider the two-way process of language influence on man and man on language. Knowing the language, a person owns its conceptual picture of the world (CPoW). It extends the angle of view to the objects of reality. “*The reverse effect of language is all the more definite because through it everything created by peoples in the past affects the individual*” (*Humboldt, 1985*). Hence the idea that if a language has a cultural specificity, then mastering the language includes mastering CPoW of a particular culture. Thus, the mediators of such CPoW are not only the native speakers (in the traditional sense, those for whom the language is native), but also those representatives of other cultures who speak and understand another language. A person in the language aspect is considered as a language personality and has a three-level structure of language acquisition: verbal level, the level of the picture of the world and the level of communicative needs (*Karaulov, 2010*). If we take native speakers, they are fluent in the language and have all three levels, while those who know the language, although not traditional speakers, but are able to operate with words and concepts that are hidden behind them and thus act as mediators of the linguistic picture of the world (LPoW) and CPoW hidden behind it. “*Verbalized knowledge is represented by concepts – operational units of the conceptual picture of the world. Those concepts that are connected by verbal codes represent operative units of the linguistic picture of the world and form “internal vocabulary” as objectified knowledge in language*” (*Drach, Mykolenko, Tyshkovet, 2019*). The inner lexicon is a reservoir for concepts (*Bila, 2020: 7*). Thus, associations, as an internal lexicon of personality, are an example of that objectified knowledge in the language of CPoW.

Thus, the CPoW mediator – we define the person who obtains the language as an instrument of the LPoW, which in its activities is the subject implementation of the CPoW. Thus, we took into account the results of the survey not only of native Ukrainian speakers. Within the CF there are units of intercultural logosphere “space” – a set of all language units from all the LPoW in the world, all the world models (*Makhachashvili, Semenist 2020:196*), which is conditionally verbalization of abstract and empirical elements of the category of space.

Thus, the **purpose** of the study is to establish the common semantics of the subconcepts E-ПРОСТІР and КІБЕРПРОСТІР with which they entered the conceptual field «простір» due to the expansion of information space.

3. Methodology

To reach the aim, we will use *the method of psycholinguistic associative experiment* that is explained by the specific of the object of study. “*Human mind is a close system and one cannot observe its processes directly. Hence linguistics has to neglect the main methods of studying such as observation and introspection and to apply experimental techniques*” (*Vasianovych, 2020: 110*).

The technique of associative-semantic experiment is often used to study the associative field of concepts. It makes it possible to identify a set of paradigmatically and syntagmatically

related verbal representatives of concepts in the text, as well as a system of associations generated by them (Surmach, 2012).

When studying the conceptual field of «іпоctip» and identifying the real modern picture of its structure we employ a mix of two of three types of associative experiment suggested by Glukhov. It is a free associative experiment (Glukhov, 2005) aimed at establishing new tokens in the conceptual field. A purposeful experiment (Glukhov, 2005), on the other hand, can establish tokens that are traditionally associated with the concept but are already obsolete or obsolete, and on the contrary confirm the relevance of other already known ones. Thus, a mixed associative experiment should allow for a complete associative description of the word stimulus, which may be the concept itself. The stimuli for the reactions were given in the written form, presented to the respondents by the Google Form questionnaire online.

The **material** of the research is the answers of the respondents left in the questionnaire submitted in the electronic online form in Google Forms. 105 questionnaires were collected: 56 questionnaires in Ukrainian, 30 questionnaires were collected in Russian, 13 questionnaires in English and 6 in French.

We believe that in the context of internationalization, globalization and widespread use of foreign language vocabulary, associations of respondents may arise in different languages. Also, we do not rule out the possibility of bilingual respondent that is typical for Ukraine. Thus, we identified three groups of keepers of CPoW as respondents of the questionnaire based on the obtained data: 1) Respondents whose answers were in Ukrainian (speakers of CPoW); 2) Respondents who chose Ukrainian as their native language, but whose answers were in a foreign language (speakers of CPoW); 3) Respondents who indicated Ukrainian as a language they spoke but answered in a foreign language (CPoW mediators). As a result, 86 questionnaires out of 105 were studied.

Socio-cultural background of reactions was identified by the first 4 questions in the questionnaire. Age of participants: 86 respondents voluntarily participated in the survey aged 15 to 51 years. Gender of participants: 82.56% of respondents were women, and 17.44% were men, or 15 men and 71 women. Mother tongue: for 21 respondents Russian is their mother tongue and for 66 respondents out of 86 Ukrainian is their mother tongue (one of whom identified himself as bilingual).

In this article we represent and analyze the reactions given to the questions № 6,7,11,14 of the questionnaire that aimed to build definition, synonymous sequence around concepts E-ІПОCTIP and КІБЕРІПОCTIP.

4. Results to stimulus «E-ІПОCTIP»

Among the respondents who answered in Ukrainian, 7.1% chose the interpretation of the abromorpheme e-as “*emotional*”, and 92.9% of respondents chose the definition of e-space as “*electronic space*”.

As a result of answering question № 6, a list of 348 reactions were gathered. 247 free associations in Ukrainian was compiled, 116 reactions tokens verbalizing it are repetitive, and the other 131 reactions are represented by a token only once. Reactions are presented in descending order, except for unique reactions:

Table 1

Free reactions to the stimulus E-ПРОСТІР in Ukrainian

	Reaction	Frequency		Reaction	Frequency
1.	Інтернет	14	17.	Де	3
2.	Простір	11	18.	В	3
3.	Інформація	7	19.	Чьогось	2
4.	Мережі	6	20.	Технології	2
5.	Електронний	5	21.	Онлайн	2
6.	Спілкування	4	22.	Нова	2
7.	Соціальні	4	23.	Інформаційний	2
8.	Навчання	4	24.	Який	2
9.	Можливості	4	25.	Доступ	2
10.	Комунікація	4	26.	Свобода	2
11.	Електронна	4	27.	Для	2
12.	Середовище	3	28.	Різних	2
13.	Мережа	3	29.	База	2
14.	Комп'ютер	3	30.	Даних	2
15.	Інформації	3	31.	Зручність	2
16.	Доступність	3	32.	Нова	2

Among the 30 questionnaires of respondents mediators of Ukrainian CPoW, who answered other proposed languages, 73% deciphered the abromorpheme e- as “*electronic*”: 10 respondents answered in another language (Russian and English) but indicated Ukrainian as their mother tongue, 12 respondents indicated Ukrainian as their language and deciphered e-as “*electronic*”. Respondents who gave answers in French did not choose the electronic option as a reaction to the abromoframe e-, so their answers are not included in the associative studies of E-ПРОСТІР. In total in another 101 free reactions collected, 72 of them are unique:

Table 2

Free reactions to the stimulus E-ПРОСТІР in Russian and English of Ukrainian CPoW mediators

	Reaction	Frequency
1.	Интернет	6
2.	Онлайн	4
3.	Информация	3
4.	Сеть	3
5.	Электронный	3
6.	In	2
7.	Internet	2
8.	Доступ	2
9.	Пространство	2
10.	Технологии	2

Taking into account 348 reactions received to the question № 6 in all the languages, the ten most common tokens of free reactions to the E-ПРОСТІР stimulus were singled out from the mediators of the Ukrainian CPoW:

Table 3

**Top-11 tokens of free verbalization of the concept Е-ІІРОСТІР
by Ukrainian СРoW keepers**

	Token	Frequency	Among them NOT in Ukrainian	%
1.	Інтернет	22	8	6,32
2.	Інформація	14	4	4,02
3.	Простір	13	2	3,73
4.	Електронне	11	3	3,16
5.	Мережа	10	4	2,87
6.	Соціальне	8	1	2,29
7.	Навчання	7	3	2,01
8.	Онлайн	6	4	1,72
9.	Спілкування	5	1	1,43
10.	Комунікація	4	-	1,14
11.	Доступ	4	2	1,14

The tokens in the table 3 presents the new tokens of conceptual field “space” as *Інтернет, онлайн*.

If in the previous question № 6 we collected definitions, now we clarify the core area by finding synonyms in the answers of respondents, similarly to the tokens-representatives which were embodied in lexicographic sources.

The task of the question № 7 was to establish purposeful associations in the form of token-reactions in the form of nouns and noun-constructions. A total of directed reactions were collected. 255 reactions: 122 repeated and 133 unique.

184 reactions were collected in Ukrainian, 84 of them are unique. Among the 184 reactions most commonly used for category 1 respondents were:

Table 4

Dircted noun-reactions to the stimulus Е-ІІРОСТІР in Ukrainian

	Reaction	Frequency		Reaction	Frequency
1.	Інтернет	21	14.	Доступ	2
2.	Мережа	8	15.	Місце	2
3.	Навчання	8	16.	Пошук	2
4.	Інформація	6	17.	Телефон	2
5.	Можливості	5	18.	Розвиток	2
6.	Комп'ютер	5	19.	Слово	2
7.	Комунікація	5	20.	Доступність	2
8.	Середовище	5	21.	Платформа	2
9.	Спілкування	3	22.	Зв'язок	2
10.	Швидкість	3	23.	Сайт	2
11.	Знання	3	24.	Простота	2
12.	Допомога	2	25.	Екран	2
13.	Дослідження	2	26.	Телефон	2

71 reactions were gathered in another language, 51 are unique: Respondents who gave answers in French did not choose the electronic option as a reaction to the abromoframe e-, so their answers are not included in the associative studies E-ПРОСТІР.

Table 5

**Directed noun-reactions to the stimulus E-ПРОСТІР
in Russian and English of Ukrainian CPoW mediators**

	Reaction	Frequency
1.	Интернет	5
2.	Сеть	3
3.	Скорость	3
4.	Технологии	3
5.	Знания	2
6.	Мир	2
7.	сайт	2

Considering all the received 255 reactions to the question № 7 in Ukrainian, Russian and English, the nine most common tokens of directed reactions to the E-SPACE stimulus were singled out from the mediators of the Ukrainian CPoW:

Table 6

**Top-9 directed tokens of directed verbalization of the concept E-ПРОСТІР
by Ukrainian CPoW keepers**

	Token	Frequency	Among them NOT in Ukrainian	Quality %
1.	Интернет	26	6	10,19
2.	Мережа	12	4	4,70
3.	Інформація	9	3	3,52
4.	Навчання	9	1	3,52
5.	Комунікація	7	1	2,74
6.	Комп'ютер	7	1	2,74
7.	Швидкість	6	3	2,35
8.	Середовище	6	1	2,35
9.	Можливості	5	-	1,96

A total of 603 reactions were collected, 282 of which were collectively recognized, which is 46.7% of all reactions and are presented in the form of 52 repeating tokens with different frequencies. The second part consists of 321 unique reactions, which is 53.2% of all reactions and corresponds to 263 unique tokens in three languages: Ukrainian, Russian and English.

According to the definitions presented by other respondents, there are 7 semantic microfields:

E-ПРОСТІР :: INFORMATION : *де наявна потрібна нам інформація, безліч інформації, якась вмістилище чи протяжність чогось, зміни, знання, технології, Бібліотеки, статті, тести онлайн; нова система пошуку чогось, типу вікіпедія; мова, контекст, безліч формації, база корисних даних, Електронний курс, Дистанціонка, Учеба, онлайн конференції etc;*

Е-ПРОСТІР :: POSSIBILITIES : *можливості, простір для онлайн комунікації; електронна мережа, де можна виконувати ряд дій; саморозвиток, маніпуляція, соціалізація, уподобання, проведення навчально-наукових досліджень, шлях до саморозвитку, обмін інформацією, накопичення інформації, середовище для розвитку і навчання, місце дослідження носіїв різних мов, нові можливості, один з шляхів до саморозвитку, навчання, зв'язок, мобільність, швидкість, виклики, доступ, A place in the internet for sharing educational info, Пространство для общения, Свободное место для размышлений, etc;*

Е-ПРОСТІР :: ANALOG OVERALL ENVIRONMENT : *Космос, Вселенная, всемирная паутина, простір, евклідов простір, цифровий світ, електронний простір, параллельный мир, виртуальное общество, неземное смешанная реальность, digital environment in which we regularly function, Інтернет, Интернет, сеть интернет, мережа, онлайн, платформа, форум соцмережа, соціальна мережа, група, фальш, пошуковик, блог, сайт, електронна пошта, код, віртуальна реальність, пошукова система, спільнота, Фейсбук, гул, cloud, social networks;*

Е-ПРОСТІР :: DEVICES: *пристрій, Екран, засіб, Комп'ютер, електрон, технологія технології, телефон, ікт, ноутбук, смартфон computer;*

Е-ПРОСТІР :: SOCIAL INTERACTION : *спілкування chats, веб-сайти, браузер, соціальні мережі, величезний спільний чат, оточення; соціальна мережа, соціальне медіа, аккаунт в Інтернеті, блог, електронна платформа, соцмережі, співпраця;*

Е-ПРОСТІР :: GOOD: *незалежність, простір де комфортно, цікаво, безпечно, легкість, простота, успіх, легкодоступність;*

Е-ПРОСТІР :: LIMIT: *територія область, шир, розмах місце розташування простір середовище сфера, земля, повітря, дім, свобода, українське, молодість дорослі.*

Thus, based on free and directed associations of respondents, we get the following nominative field of the concept "E-SPACE":

Table 7

Associative field of concept Е-ПРОСТІР

	Tokens	Frequency	Quality %
10.	Інтернет	48	7,96
11.	Інформація	23	3,814
12.	Мережа	22	3,64
13.	Навчання	16	2,65
14.	Простір	14	2,32
15.	Комунікація	11	1,82
16.	Середовище	11	1,82
17.	Комп'ютер	11	1,82
18.	Можливості	10	1,65
19.	Соціальне	10	1,65
20.	Спілкування	9	1,49
21.	Онлайн	8	1,32
22.	Швидкість	7	1,16
23.	Доступ	6	0,99

The tokens are given in table 3 tokens (14) *Інтернет, інформація, мережа, навчання, простір, комунікація, середовище, комп'ютер, можливості, соціальне, спілкування,*

онлайн, швидкість, доступ we define similar to the definitions collected in lexicographic sources and relate them to the zone of CF “space”.

5. Results to stimulus КІБЕРПРОСТІР

A synonym for e-space was chosen as cyberspace by 35 respondent answering in Ukrainian out of 52, by 5 respondents answering in Russian, 3 in English while having Ukrainian as native, and by 8 respondents out of 12 respondents answered in Russian but mediators of Ukrainian CPoW.

In 201 respondents' tokens-reactions, the cyberspace is the synonym to the electronic space. They describe it in questions № 1 with 132 free reactions via the following 36 repeated tokens and 96 unique:

Table 8

Free reactions to the stimulus КІБЕРПРОСТІР in Ukrainian

	Reaction	Frequency		Reaction	Frequency
1.	Інтернет	8	11.	Спілкування	2
2.	Інформація	6	12.	Інформаційне	2
3.	Мережа	5	13.	Система	2
4.	Технології	5	14.	Ігри	2
5.	Світ	4	15.	Віртуальний	2
6.	Середовище	4	16.	Електронний	2
7.	Безпека	3	17.	Сучасність	2
8.	Простір	3	18.	Дані	2
9.	Штучний	2	19.	Де	2
10.	Небезпека	2			

Ambiguous 69 reactions with a low frequency presentation were given by respondents who answered in the questionnaire in by English and Russian tokens. 15 reactions verbalized by tokens were repeated and 54 reactions are unique:

Table 9

Free reactions to the stimulus КІБЕРПРОСТІР in Russian and English of Ukrainian CPoW mediators

	Reaction	Frequency
1.	Інтернет	4
2.	Технологии	3
3.	Інформація	2
4.	Виртуальная	2
5.	Реальность	2
6.	Пространство	2

From the given reaction in Ukrainian by the Ukrainian native speakers, in Russian and English by the Ukrainians and in Russian and English by the mediators of CPoW of Ukrainian we may point out 8 high-ranked tokens that used to verbalize concept КІБЕРПРОСТІР by the representors of all the studied 3 groups of Ukrainian CPoW keepers:

Table 10

**Top-8 tokens of free verbalization of the concept КІБЕРПРОСТІР
by Ukrainian CPoW keepers**

	Reaction	Frequency	Among them NOT in Ukrainian	Quality %
1.	Інтернет	12	4	5.97
2.	Інформація	8	2	3,98
3.	Технології	8	3	3,98
4.	Мережа	6	1	2.98
5.	Середовище	5	1	2.48
6.	Простір	5	2	2.48
7.	Безпека	4	1	1.99

The task of the question № 14 was to establish directed associations in the form of token-reactions to КІБЕРПРОСТІР in the form of nouns and noun-constructions. A total of 151 reactions were collected. 102 reactions presented by respondents of the 1st category were, 41 reactions were unique:

Table 11

Directed noun-reactions to the stimulus КІБЕРПРОСТІР in Ukrainian

	Reaction	Frequency		Reaction	Frequency
1.	Інтернет	6	9.	Дані	4
2.	Інформація	5	10.	Майбутнє	4
3.	Мережа	5	11.	Інтелект	3
4.	Комунікація	5	12.	Пошук	3
5.	Технології	5	13.	Технологія	2
6.	Комп'ютер	5	14.	Знання	2
7.	Система	4	15.	Навчання	2
8.	Середовище	4	16.	Простір	2

Respondents- mediators of Ukrainian CPoW gave 48 directed reactions to the stimulus КІБЕРПРОСТІР: 14 reactions are repeated by the tokens presented in the table, the other 36 reactions are unique.

Table 12

**Directed noun-reactions to the stimulus КІБЕРПРОСТІР
in Russian and English of Ukrainian CPoW meadiators**

	Reaction	Frequency
1.	Інтернет	5
2.	Защита	2
3.	Информация	2
4.	Среда	2
5.	Сеть	2

It is necessary to mention that only 1 respondent intentionally did not provide verbalized reaction to the stimulus cyberspace. Among the rest of 150 directed

reactions in Ukrainian, Russian and English the top-list of tokens verbalizing the concept КІБЕРПРОСТІР includes:

Table 13

**Top 10 tokens of directed verbalization of the concept КІБЕРПРОСТІР
by Ukrainian CPoW keepers**

	Reaction	Frequency	Among them NOT in Ukrainian	Quality %
1.	Інтернет	11	5	7,28
2.	Інформація	8	3	5,29
3.	Технології	8	1	5,29
4.	Мережа	8	3	5,29
5.	Комп'ютер	6	1	3,97
6.	Середовище	6	2	3,97
7.	Комунікація	5	-	3,31
8.	Дані	5	1	3,31
9.	Майбутнє	5	1	3,31
10.	Інтелект	4	1	2,64

Based on the answers from the questionnaires of all 3 groups of respondents, on the questions № 11 and № 14 including repeated and unique tokens we distinguish the following microfields of the concept of КІБЕРПРОСТІР on the basis of their thematic compatibility: “digital”; caused by the digital nature of the second microfield “artificial world”; artificial environment “Internet” and its components; modernity ; risk and possibility.

КІБЕРПРОСТІР :: DIGITAL: *кодування, програмування, автоматизований програмований спосіб отримання інформації, кодування, іт-технології, подвійний шифр, цифровий простір, цифрова среда, цифра кібернетика, код;*

КІБЕРПРОСТІР :: ARTIFICIAL WORLD: *ілюзія, нереальний світ, інший світ, світ бажань, електронний світ, штучність, штучний інтелект, знаючі люди, прагматичність, ігри, певне «місце» в комп'ютерному середовищі, де знаходяться всі дані та програми, місце – де машини головні, роботизований простір, комп'ютерна система, техніка, інтелект, искусственный, компьютерные системы, мир, gaming, environment in which human interaction is mediated by ai, поглинаючий нереальний мир, абстракція, операционные системы, инженер робот життя. Actually, the creator of the term W. Gibson himself spoke about artificiality, “hallucinogenicity” of cyberspace in life without science fiction Neuromancer (Gibson, 1984:47) explaining that it is simply an abstract collection of graphical representations of human life in a computer;*

КІБЕРПРОСТІР :: INTERNET: *Інтернет, середовище пов'язане з новітніми технологіями та інтернетом, увесь інтернет, світова павутина, онлайн, глобальна мережа, платформи, блоги, соціальні мережі, е-пошта, віртуальний простір мережі виртуальная реальность, интернет, он-лайн, google drive, moodle and any other platform for co-working, platform, комп'ютер, виртуальная реальность, сеть интернет, технологи, скайп, сервер, гугл;*

КІБЕРПРОСТІР :: MODERNITY: *сучасність, інновації future, мультифункціональність, інтерактивність, нова історія, прогрес, новизна;*

КІБЕРПРОСТІР :: RISK: небезпека, безпека спілкування, невизначеність, інформаційна безпека, зацита, кибербезпека, осторожность, хакерство, анонимность атака;

КІБЕРПРОСТІР :: POSSIBILITIES: інформаційне середовище, інформаційний простір, обмін, доступ, підключення, отримання, спосіб, накопичення, спілкування, навчання, можливості, вдосконалення, робота, медіа, є основою для можливості існування космополітичного суспільства, глобалізація, підключення, розуміння, комунікації, дані, телекомунікації, інформація, учеба информационная среда, co-working, sharing, communication, широкіе возможности, свобода, онлайн, послуги.

Based on 352 free and directed associations to the stimulus of *КІБЕРПРОСТІР*, we fix the following nominative field of the concept «КІБЕРПРОСТІР»:

Table 14

Associative field of concept КІБЕРПРОСТІР

	Tokens	Frequency	Quality %
1.	Інтернет	24	6,81
2.	Інформація	21	5,96
3.	Технології	17	4,82
4.	Мережа	14	3,97
5.	Середовище	12	3,40
6.	Система	9	2,55
7.	Комунікація	8	2,27
8.	Комп'ютер	7	1,92
9.	Простір	7	1,92
10.	Дані	6	1,70
11.	Інтелект	6	1,70
12.	Майбутнє	5	1,42
13.	Безпека	4	1,13

6. Conclusions

As a result of the mixed free and directed associative experiment, **955** reactions were collected. According to the associations given by the three groups of CPoW keepers specific and common features of concepts Е-ПРОСТІР and КІБЕРПРОСТІР are the following:

Specific quantitative features of the nomination of the concept of Е-ПРОСТІР presented by the tokens: *навчання, простір, можливості, соціальне, онлайн, доступ*. From here we can talk about the educational and cognitive, socially useful nature of e-space. Microfields distinguished in the conceptual field of subconcept Е-ПРОСТІР are INFORMATION, POSSIBILITIES, ANALOG OVERALL ENVIRONMENT, DEVICES, SOCIAL INTERACTION, GOOD, LIMIT.

Cyberspace was distinguished by such tokens-reactions *as система, дані, інтелект, майбутнє, штучне, безпека*. Based on the semantical relativeness of the reactions collected we distinguished 5 microfields inside the concept КІБЕРПРОСТІР: DIGITAL, ARTIFICIAL WORLD, INTERNET MODERNITY, RISK, POSSIBILITIES. Thus, the key feature of the concept of КІБЕРПРОСТІР is based on its digital nature and related artificial life, robots, professionals who know how to operate such numbers, codes and around the state of information security.

As a result of elaboration of token-reactions on stimuli Е-ПРОСТІР and КІБЕРПРОСТІР, we may conclude that they are used with synonymous meaning for 59% of respondents. It is proved not only by the individual definitions and noun-associations to the concepts in open and directed questions, but also the frequency of representations of such common conceptual constants of both concepts. If we compare the data received about the associative fields of Е-ПРОСТІР and КІБЕРПРОСТІР concepts we may state that Е-ПРОСТІР and КІБЕРПРОСТІР is the *Інтернет* 7,53%, *інформація* 4.60%, *мережа* 3,76 % *середовище* 2,40%, *простір* 2,19 %, *комунікація* 1,98%, *комп'ютер* 1,88 %.

The comon feature of is POSSIBILITIES like communication, and the form of another ANALOG or ARFTTIFICAL WORLD.

Thus, the obtained tokens-representatives of the concepts Е-ПРОСТІР and КІБЕРПРОСТІР are included in CF “space”. The tokens *Інтернет, комп'ютер, швидкість, електронний, онлайн, система, дані, база, сайт, майбутнє, інтерактивний, віртуальний, цифровий*, were not previously included to CF “space” and as a result of activity of information with space now enter into the draft of the concept «ПРОСТІР», through CF «простір».

Expansion of CF “space”: as a result of obtaining data from a mixed associative experiment, the concepts Е-ПРОСТІР and КІБЕРПРОСТІР are established as subconcepts of two conceptual fields SPACE and INFORMATION which have the following conceptual constant: Е-ПРОСТІР and КІБЕРПРОСТІР: is an ELECTRONIC COMPUTER ENVIRONMENT to search INFORMATION by HIGH-SPEED COMMUNICATION via the INTERNET. Thus, their ability to expand CF “space” is confirmed, and the relation of concept Е-ПРОСТІР and КІБЕРПРОСТІР to it as subconcepts was proved by their definition as the environment.

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REPRESENTATION OF THE ANCIENT MYTH ABOUT HYPERION IN MODERN GRAPHIC LITERATURE

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Summary

The article aims to investigate the peculiarities of the new myth about Hyperion embodied in Marvel's periodical graphic literature in comparison with the tradition of literary interpretations of the traditional Titanomachy myth. The article considers graphic literature to be a developing intermedial genre gaining popularity among readers, although underestimated by scholars. The interconnections between the comics and romantic and postmodern literature are studied. It is also highlighted that borrowings from European literature are a characteristic feature of American cultural tradition due to the lack of its own ancient basis. The article also traces the influence of modern comic tradition on reconsidering the ancient story about a rebellious titan. Functioning of superheroes as role models for the youth, the tendency for comic authors to depict conventional characters being close to modern realia and understandable for mass readers comes into the focus of the research. Thus, a new myth about Hyperion of the XXI century is created, in which the main character becomes a combination of such iconic images as Prometheus and Superman, reconsidered in the way making it possible for the image to serve the agenda and ideology.

Keywords: comics, new myth, titan, Marcus Milton, Avengers, Marvel, mass reader

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1. Introduction

Comics, or graphic novels, are a relatively new genre of art, although its roots go deep into prehistoric times. Images with inscriptions as a means of communication date back to ancient Egypt. Graphic novel, which belongs to the postmodern genre, has recently become widespread because it helps readers understand the story very easily.

In today's world, graphic novels and comics are very common. Thus, according to the Statista website, 37% of the adult population of the United States at least sometimes read comics (compared to 65% of printed books readers) in 2018 (Watson, 2020). Moreover, graphic novels are increasingly being screened and turned into games, which strengthens their position in the media space.

As the current media interest continues to focus on comics and related series, the popularity of the graphic novel will continue to grow. The time has come for the general public acceptance of graphic novels, which are taking their place as "real" literature. However, for the scientific perception of graphic literature there are still not enough critical works on this topic. Thus, it is the combination of the readers' interest and lack of research on the topic that determines the relevance of the presented work.

This study is the first scientific attempt to examine a series of comics about superhero Hyperion by Marvel from a literary point of view and examine its relationships with the tradition of literary interpretations of the Hyperion image from ancient times to the twentieth century.

The purpose of this article is to investigate the peculiarities of the image of Hyperion in modern graphic literature. It involves a number of tasks: to investigate the level of research on graphic literature; to compare the image of Hyperion in graphic literature and in the existing literary tradition; to investigate the influence of comic tradition on the image of Hyperion by Marvel; to highlight the unique features of the hero's image, characteristic only of graphic literature.

The research methodology is complex and includes elements of comparative, literary-historical methods; motive analysis is also used. The use of the mythopoetic method allows to identify the basic images, motives and plots. Semiotical and myth-critical approaches have become auxiliary methods. The deep symbolism, intertextuality and metatextuality of the studied texts determine the use of the hermeneutic method. When comparing graphic literature with traditional interpretations of myth, there is a need to turn to the historical and cultural approach, that is why the latest research in the field of comparative studies are used.

2. Intermedial interpretations of Hyperion's image

The ancient Greek myth of Hyperion, which is a part of the series "Titanomachy", is dedicated to the struggle of the Uranian titans and the Olympian gods. According to the legend, a new generation of Olympian gods rebelled against the old gods, the powerful titans, in order to overthrow them and rule the universe. The leader of the Titans in this struggle was Cronus – the former supreme god. On his side, among others, fought the titan Hyperion, the son of Cronus and Gaia. His name means "the one who goes high". The Olympians won the war, after which the Titans were overthrown to Tartarus. Others were subverted by the arrows of the Sun God Apollo, the son of Zeus, or murdered by heroic demigods.

The plot of "Titanomachy" and the image of Hyperion became the basis for many works of art and literature of the Romantic era. Among them there is the work of German romantic author Friedrich Hölderlin "Hyperion" (*Hölderlin, 1797*), which was the first projection of the myth about Hyperion on European literature, reflecting the moods of his time; two unfinished poems by John Keats "Hyperion" (*Keats, 1818*) and "The Fall of Hyperion" (*Keats, 1819*), as well as a novel by American writer Henry Longfellow "Hyperion" (*Longfellow, 1839*). The romantics' appeal to the same myth was due to the attractiveness of Hyperion's image, which embodied a free rebellious beginning and an indomitable spirit.

Hölderlin in "Hyperion" epistolary novel (1797), through the events in Greece in the VIII century, reflected upon the problems which were typical of Germany. To characterize the protagonist of the novel – a young man called Hyperion – the most important thing is that he is a fighter for personal happiness and for Greece. Therefore, it is a certain projection of the mythological titan on the modernity of the author. For Hölderlin and his Hyperion, the gap between dream and reality remains insurmountable, which is characteristic of European romanticism.

English poet J. Keats in his poem "Hyperion" (1818) and its sequel "The Fall of Hyperion" (1819) also reinvents the traditional myth in a romantic way, focusing on the image of a mythological hero – the ideological and active leader of the Titans, who inspires them to fight. Changing the old with the new and the better is the central motif of Keats's poem, and the struggle of the Titans becomes an illustration of the grand idea of historical progress. Keats believes that it is necessary for humanity to evolve to achieve the ideal of absolute beauty and harmony. He also advocates the idea that poets are the closest to this ideal.

Henry Longfellow was the first American writer who interpreted the myth about Hyperion. His novel "Hyperion" (1839) also represents a romantic interpretation of the myth. It shares such features of a romantic story as personalising the text, trend to include extracts from

poetic works in order to highlight the author's point of view, paying much attention to depicting nature, emphasising the leading role of poets in society and romanticising the idea of struggle. Longfellow's novel is partly autobiographical. So, we can say that the image of the main hero – Paul Fleming – is partly the image of Longfellow himself, moreover, the protagonist transmits the author's ideas concerning creativity, life and death, divine forces.

“Hyperion” (1989) by American postmodernist D. Simmons (*Simmons, 1991*), like Longfellow's novel, is a new myth. But this is a typically postmodern piece of literature. This is a novel, containing such features characteristic to postmodern prose as intertextuality, double coding, genre syncretism, pastiche, author's playing literature, irony, fragmentality and epistemological uncertainty because of the crisis of faith in science and technical progress. The novel is connected to mythology on the level of text and problematics. But the author's outlook shifts to scientific-mythological, as his mythological prospect of the world is completed with scientific details taken from physics, biology and astronomy. This is a trait, typical to postmodern texts, as these days not intuition, as it was in romantic era, but facts help us understand the world.

In the end of the twentieth century, the image of Hyperion entered the intermedial space and now functions not only in literature, but also in comics, computer games and their codes, and in the cinema.

The most common situation in mass media is when the name ‘Hyperion’ is used for fictional spaceships, for example in *The Island at the Top of the World* (1974) and in a series of science fiction novels by Japanese writer Yoshiki Tanaka (1982-1987) and their anime adaptation (1988-1997) *Legend of the Galactic Heroes*, in the novel *Skybreaker* (2005) by Canadian author Kenneth Oppel (born 1967) and in the fantasy series *Skyland* (2005-2007), in the series *Star Craft* (1998-2017), *Eve Online* (2013 – present), *Mass Effect Andromeda* (2017), *Einhändler* (1997), *Hokai Impact 3rd* (2016). Hyperion is also the name of the weapon corporation in the games of the *Borderlands* series (2009-2019) and a type of futuristic weapon from the game *Final Fantasy VIII* (1999). In the series *Angel* (1999) and *Once upon a time* (2011-2018) Hyperion is the name of the rescue base and the mountain. In the poem by Mihai Eminescu, a Moldavian-Romanian poet of the late 19th century. – “*Luceafărul*” (1983) is the name of a self-aware star, and in the anime *Gekiganger III* (1998), it is the name: Emperor Hyperion. The history of interpretations of the myth of Hyperion was continued at the beginning of the XXI century. Among them there is the kaiju novel by the American writer Jeremy Robinson “*Project Hyperion*” (1974). Another notable phenomenon is the intermedial space of the Warhammer universe, which includes board role-playing codes, several computer games, and several dozen novels. One of the heroes of this universe is the gray knight Hyperion – a famous fighter for the Emperor, who is the protagonist of the novels by Aaron Dembski-Bowden (born 1980) “*Gift of the Emperor*” and Dan Abnett (born 1965) “*Inquisitor Ravenor*”.

That is, the image of Hyperion has become significant precisely for the development of the genre of science fiction. Thus, we can say that the cultural and symbolic halo surrounding the image of Hyperion is very popular today and it is used in various spheres of human activity in order to evoke certain associations with the mighty titan. But the most popular interpretation of Hyperion's image was created in the XXI century by Marvel comics company, which turned the mythical titan into a superhero.

3. Comics in literary theory

For many scholars, the word comics used to refer to a periodical that is intended for younger readers and does not carry much hidden sense. However, in the 80s of the twentieth century

there happened some significant shifts, which, according to American scientist F. Jameson, are primarily manifested in “the effacement in them of the older (essentially high-modernist) frontier between high culture and so-called mass or commercial culture, and the emergence of new kinds of texts infused with the forms, categories and contents of that very Culture Industry” (Jameson, 2008). In 1985 graphic novel “Watchmen” by DC was published by Alan Moore and Dave Gibbons. This event started an era of serious comic book literature and “Watchmen” soon became truly iconic. It led to the revival of comic art, the development of adult readership and an unsurpassed period of artistic experimentation and growth. Graphic novels have become increasingly popular in the United States over the past decade and a half. Now the market for related comic book collections continues to grow, which is often referred to as an “indication of the aesthetic and literary development of the comic art environment in the United States” (Couch 2000).

Research literature on comics has only recently begun to emerge in the past few decades. It was not until the 1970s that the field of comic studies first emerged as an academic discipline, due to a somewhat superficial and frivolous attitude towards the genre (Murray, 2017).

In 1985, Will Eisner, one of the founders of comics research, used the term ‘sequential art’ to describe the phenomenon of graphic literature in his book “Comics and Sequential Art” (Eisner, 1985). The deepest analysis of the comic art publications is McCloud's “Understanding Comics” and “Reinventing Comics”. The author understands comics as “juxtaposed... images in a deliberate sequence” (McCloud, 1992: 9). Another thorough research is Lefevre's article, emphasizing the heterogeneity of the comic genre (Lefevre, 2005).

In Europe, it has become traditional to look at comics through the prism of the theory of semiotics (Pierre Freno-Druel, Alain Ray, Jan Baetens). In the United States, several academic journals publish articles on text-image relations in comics (Richard Watts, David Carrier). In recent decades, there has been a rapid growth in empirical and experimental studies of comics as visual narratives. The leading researcher in this field is American scholar Neil Cohn.

4. Hyperion as a superhero in comics

The most notable event in the modern history of Hyperion myth interpretations was the appearance of this character in the dimension of comics, when in 2013 the Marvel studio released a series of graphic novels, or comics, about superhero Hyperion.

So, Hyperion first appeared in the 5th issue of the Avengers comic (Hickman & Spenser, 2013), but he immediately became so popular that the character received several of his own “Hyperion” series, and also appeared in such series as “Squadron Supreme”.

The protagonist Hyperion, Marcus Milton in his past as an ordinary human, embodies a huge layer of allusions and reminiscences from the world culture. The most significant of these, is appealing to the ancient Greek Titanomachy. In “Avengers” the protagonist is the last survivor of the Eternal race, which, according to Marvel comics, gave birth to the Titans. So, as in the ancient myth, Hyperion is a titanic figure. Like any superhero, Hyperion has some unique abilities: he can move fast, fly, survive in space, his body regenerates almost instantly, he is so physically strong that he can hold two planets, and lasers come out of his eyes (Hickman & Spenser, 2013), which refers to the image of the ancient titan who controlled sunlight.

But Hyperion, to whom the comics refer, as in the case of romantic poets' interpretations, is a collective image. It has more features of Helios, such as his transitional essence, the middle position between the two generations, the attempt to serve the new world. Other features which his image shares with the ancient and romantic interpretations are titanicity, greatness, the ability to fight and rebel.

Such majestic figures are quite typical of American superhero comics. Superheroes are often based on mythological characters, such as the thunder god Thor in Norse mythology or the Wonder Woman, based on the legends about Amazon warriors. This borrowing is the example of a traditional American culture's appeal to the European heritage due to the lack of its own ancient history and culture. The familiar traditional images are processed in the way necessary for American ideology and adapted to the realia of a particular time. Thus, these characters immediately gain popularity among the readers and are a great tool for conveying the author's, as well as government's, thoughts.

As for the features making comic Hyperion close to Dan Simmons's postmodern novel, they are targeting on the mass reader, abundance of allusions and reminiscences, focusing on modern scientific ideas and trends. Both interpretations use the experience of previous Hyperion versions and play with the reader using this. Moreover, both "Hyperions" are close to modern realia and worldview.

In the new millennium the image of Hyperion has been brought closer to a common man so that the reader could associate himself with the hero. Marcus was raised on one of the planets of Marvel's multiverse, his parents were ordinary people without superpowers, who instilled in him honesty, diligence, responsibility and a sense of justice. Hyperion often mentions his father's advice, which became his life principle: "Truth without compromise. Thought without error. All things for the betterment of the whole" (*Wendig, 2016*). The moral imperatives of the protagonist run through all the issues of comics: "To be given, is to know what it is to give, we know virtue because while we may not suffer, we can hear the suffering of those around us. The duties I was in charge with were more important. They were Titans and Gods and mortals doing immortal acts" (*Wendig, 2016*). Hyperion's missions also tend to become more mundane, which an ordinary person can try on themselves. He rescues the girl from bandits, helps alien orphans set up a shelter and teaches children everything he knows. "So, this is the world, and our children in it. We either choose to be crippled by that fear, or we raise the innocent to be steadfast, we teach them hope... And then believe it will be enough," he says (*Hickman & Spenser, 2013*). He is the kind of a titan that a reader finds it easy to associate himself with.

Thus, Hyperion realizes both his belonging to the race of the Titans and his responsibility for humans' life. He finds his mission in making the lives of ordinary mortals better. This is considered to be a parallel with the image of another ancient titan – Prometheus, whose figure is perhaps the most popular titanic image of mass culture. The ancient titan also felt obliged to share knowledge and skills with people, even at the cost of his own life.

In addition to borrowings from Titanomachy, there is a significant influence of the comic book hero Superman on Hyperion's image. Superman is one of the first superheroes of the DC studio, he is probably the most popular hero of the twentieth century, whose image appears not only in comics, but also in many movies, TV series, cartoons, books, songs. He has undoubtedly influenced the entire comics industry and has become the prototype for many generations of superheroes. Superman and Hyperion have not only the same abilities, such as flight, strength, the ability to emit lasers from the eyes, but also a similar moral code, based on high values, self-esteem and a desire to help people. They are created as a model for new generations what a young American and a citizen should be like. Thus, modern comics, like classical literature of its time, sets high moral standards for the reader, but speak a language understandable to modern youth. But Superman's image used to be rather idealistic: he has no doubt, no weaknesses, he does not feel anger nor strives for revenge, which makes it hard for readers to draw parallels between the superhero's reality and their life. As for Hyperion, he is quite true to life, with his own regrets and vulnerabilities, he does not always win or shows mercy when needed, he is

able to experience normal human feelings and affections. Such a mundane hero communicates the author's ideas better than an idealistic template and makes ordinary people believe that they are also capable of titanic deeds.

The Hyperion series, as well as most comic series by Marvel or DC, can be considered as examples of new myth-creation of the metamodern information era. Such new myths embody the features of ancient legends, classical and postmodern literature, other examples of graphic literature, science, cinema and everyday life, processing it all into a multidimensional unity. Besides, they take into consideration the allegiances and opinions of the mass reader as well as the agenda. Thus, comics combine scientific worldview, making it topical, with the mythological, making it easier to believe, adding there some specific aspects of post-industrial outlook, and enclose them into effortlessly-understandable form which gives such kind of literature the opportunity to influence a wide circle of readers.

5. Conclusions

To sum up, the image of titan Hyperion represented in graphic literature by Marvel is a modernized and adjusted to topical problems version of an ancient character. The Hyperion of nowadays combines not only the traits of Hyperion and Helios, whose name he obtains, but also some features of Prometheus, the titan who did most of all the titans for the humanity. The superhero also shares the traits characteristic of romantic interpretations of the image, such as great mission, outstanding abilities, and willing to change the world for the better. As for the common features with postmodern interpretations of the myth, they are characterized by scientific worldview, skepticism of the grandeur of the titans and their ways, using modern material, understandable for a wide circle of readers. The comic series also shares some peculiarities with the image of Superman, that has become cultic in XX century mass culture. These are not only similar superpowers, but also high moral values of both characters and their aim to serve as a role model for public. However, the comic image of Hyperion has some unique qualities, making it close and understandable for readers, such as vulnerability, affections and doubts. Due to such 'humanization' it becomes easier to feel the empathy and associate oneself with the hero, which leads to higher sense of morality and willing to improve the world among the youth. Nevertheless, such influence on readers can be used by comics' creators for the means of propaganda and shaping opinions in the way appropriate for authorities.

To conclude, the comic series about Hyperion are a new myth which is a typical product of the metamodern information era. It is a multidimensional unity which embodies all the previous cultural experience as well as modern trends, and influences as many readers as none of the traditional myths could before.

In general, the scientific research of graphic literature seems insufficient at this stage, and needs further development and improvement. When it comes to the comparison of mythopoetics in comics and in classic or postmodern literature, there is a lack of such research both in Ukrainian and foreign studies.

The prospects for further research are to study the transformation of other ancient and traditional images in modern graphic literature and trace the tendencies characteristic of comics' mythopoetics and the principles of myth creation within the visual narrative genre.

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COGNITIVE AND LINGUISTIC MECHANISMS OF CONCEPTUAL INTEGRATION OF *SACREDNESS*

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Summary

The aim of this paper is to investigate the cognitive peculiarities of the concept of *Sacredness* and the means of expressing the chosen concept in the novel of James Joyce “*The Portrait of the Artist as a Young Man*”. Much attention has been paid to specific cognitive factors that account for the formation of occasion-bound meanings for effective communication and cooperation. The topicality of the paper coincides with studying and understanding the process of categorization and conceptualization of the world and with the analysis of textual communication. We should try to figure out what roles texts may fulfil, how they might be encoded or decoded, what people are using them for in a given set of occurrence, and so forth. The words and sentences on the page are reliable clues in accessing the entity of the concept of *Sacredness*. The methods of the research are as follows: the inductive-deductive method of analysis of language material; the method of the semantic modelling and contextual interpretational analysis; the method of the quantitative counting of received language empirical data. The Novelty of the paper is associated with increased interest in cognitive linguistics and cognitive semantics; the interaction of thought and language, with an attempt to understand how our speech is made, perceived, understood and interpreted.

Keywords: categorization, cognition, concept, pragmatics, communication, mentality, reference, semantic change.

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1. Introduction

Cognitive processes play a great role in the actuation of semantic change when speakers modify conventional meanings by resorting to various cognitive mechanisms to meet changing communicative and cognitive needs. Such a perspective on semantic change appears to demonstrate that meaning can be affected by the subjectivity of the human mind, contrary to its traditional treatment by modern semantic theory as objective and invariable. There are some ways the term *concept* is understood. In our paper, we will try to discuss the philosophical, psychological, cognitive and linguistic points of view.

Our paper deals with the analysis of language as a means of the organization, processing and interoperating information with the emphasis on studying the chosen concept. A person, having comprehended some information and given it a name or definition, conceptualizes an event or phenomenon of the external world. The term *concept* may be defined as a complex of associations, comprising the certain mental area of the speaker. We would like to investigate how the efficiency principle is realized. More specifically, we are interested in the choice of a conventional expression for use in innovative ways for the sake of efficient communication and how it is implied in the literary text. However, we will try to go beyond the pure linguistic analysis of how new categories and concepts are named and look

at the cognitive processes in the mind of the individual speaker when facing communicative challenges.

As much as a change of meaning should be considered a semantic issue, the traditional semantic theory is not capable of explaining semantic change and even excludes it from its subject matter, although it should be considered one of the major tests of its validity (*Geeraets, 2007: 221*). Lyle Campbell presents this situation in the following way that we would be in a better position to understand semantic change if we could base our understanding of change in meaning on a solid theory of semantics (*Campbell, 2007: 130*).

In the following, we will first review some general issues of cognitive models of communication and then discuss the connection between pragmatic and semantic changes and cognition in general. We will try to examine how the actuation of semantic change originates in various cognitive mechanisms in the mind of the individual speaker to adapt the language to new circumstances in the form of novel expressions. Undoubtedly we will pay much attention to specific cognitive factors that guide the formation of occasion-bound meanings for efficient but economical reference and representation

2. Cognitive Models of Communication

The cognitive motivation for the innovative use of expressions will first lead to individual linguistic action, which will actuate semantic change only if such actions of language users are eventually summated. Both Keller and Raimo speak of language change as the collective consequence of an invisible hand process. Such a process occurs when individuals perform certain actions intentionally but not with the consequences that will nonetheless eventually be caused in mind (*Keller, 1994: 130; Raimo, 1989: 125*). For instance, a beaten path across a lawn will ensue through individuals intentionally crossing the lawn although not having the purpose of creating such a path. The path originates as a non-intended collective consequence of the intentional individual actions. Language change is supposed to be a similar process. Within a formulation of the invisible hand explanation Keller includes the depiction of personal motives, intentions, goals, convictions, which form the basis of individual actions (*Keller, 1994: 151*).

Gábor Györi thinks that an analysis of these motives does not provide a full explanation for the individual actions, i.e., the innovative usage of conventional expressions, but for a full understanding of semantic change, its cognitive background must also be uncovered (*Gábor, 2002: 151*). The alteration in the usage of an expression across a speech community as a cumulative result of the communicative activity of its members can only indirectly be characterized as a cognitive phenomenon since the phase in which cognitive mechanisms and principles of categorization operate in the process of semantic change is obviously that of its actuation in the communicative activity of individual speakers. The effort to convey ideas appropriately and effectively may lead to the production of occasion-bound meanings in the language. In general, such new variants of meaning arise when speakers feel the need to refer to parts of reality for which no conventional name exists in the language or wish to express new ideas or views or emotional stances about or towards their environment and deem the available conventional expressions unsatisfactory for that purpose describes this situation as speakers possessing a “potential designatum” for which they need to find an adequate sign. In this way it is the individual speaker who actively (though not necessarily consciously) induces the change in an attempt to make his mental model of the world accessible to the hearer (*Geeraets, 2007: 150*).

The communicative motives for inducing changes in meaning are quite obvious. Historical linguistics has offered plausible causal and theological explanations in the form of

intralinguistic and extralinguistic factors that are responsible for the speakers' linguistic behaviour when altering their usage of language and thereby actuating changes of meaning. In the case of external causes of change (e.g., historical, socio-cultural, etc.) the communicative reasons for the introduction of new meanings are self-evident, but intralinguistic causes also have essentially communication-related roots. Changes related to the elimination of homonymic clash, differentiation of synonyms, or chain shifts within lexical fields all stand in the service of making the language more efficient for communication. Even causes that have been described as psychological, such as 'boredom' with a word (for instance in the case of slang), allow the detection of communicative motives. Keller's communicative maxim "*Speak in such a way that people pay attention to you*" may definitely induce such changes (Keller, 1994: 115).

Communicative efficiency motivates even such processes of semantic change as Grammaticalization and the development of discourse markers, etc. (Arutyunova, 1990: 411).

In our paper, we will explore the practical appliance of the special characteristics of cognition that provide the motivational basis for the production and comprehension of semantic innovations and thus influence the way semantic change is designed. These are the characteristics that underlie the sharing of individual mental models in communicative interaction to produce culturally valid models of reality.

It has to be mentioned though that there are attested cases of semantic change in which only pure chance and no cognitive processes seem to play a role. McMahon mentions that the movement of the sense of *flaunting* towards that of 'flout' is an ongoing change in English (McMahon, 2000: 154). It is indeed hard to see what cognitive motivation could underlie this semantic shift, and it may be a simple case of misinterpretation, probably caused by the similarity of the signifiers. As another famous example, the etymology of the word *bead* could be mentioned. One explanation claims that in this case, erroneous learning occurred between generations. Children may have misinterpreted the Old English word (*ge*)*bed* 'prayer' as meaning 'the little spheres on the rosary' when hearing the phrase to count one's prayers. On the other hand, Campbell interprets this change in meaning as a "metaphorical extension from the 'prayer', which was kept track of by the rosary bead, to the rosary bead itself" (Campbell, 2007: 219). We think that the two views do not contradict each other, since erroneous learning through misinterpretation is undoubtedly a cognitive act that should involve some standard cognitive mechanism, though wrongly applied.

Another rather common case of semantic change in which one might suspect the lack of cognitive motivation is when there is a change in the referent of a word. After all, it indeed seems to be true here those speakers' cognitive processes do not have anything to do with the change. As an example of referent change, Raimo Anttila mentions English *pen* which used to mean 'feather' and was an appropriate term "when quills were used for writing with ink" (Raimo, 1989: 144). As a consequence of the change in material culture, *pen*, today means 'writing tool'.

A demonstration of the fact that various cognitive factors guide semantic innovation will also cast doubt on the objectivist stance described in the foregoing and strengthen the recent view in semantics that meaning is based on the human understanding of the world and consists of knowledge structures that are open-ended and encyclopedic in nature. If this turns out to be a valid property of meaning, then it will also become obvious that change is a necessary and natural characteristic of meaning, or, in Mc Mahon's even stronger formulation: "*the nature of meaning is change*" (McMahon, 2000: 57).

This type of cognitive semantics also holds that semantic structure is shaped by the characteristics of human cognitive abilities, as opposed to the mentalist-rationalist view according

to which it matches reality in an objective way independent of how language users happen to see the world and others have shown how metaphorical and metonymical processes, image schematic projections, idealized cognitive models, etc., help us understand and interpret the world around us. It is no wonder then that this leaves its mark on the language and will fossilize as diachronic semantic phenomena. In line with these views, several recent works on semantic change take a cognitive approach for granted (*Aarts et al., 2006: 210*).

Every national linguistic science has specific attitudes towards cognitive linguistics and cognitive semantics in particular. Nowadays this enterprise is very popular in Ukraine. The Ukrainian cognitive research is developing alongside the European one. Such prominent Ukrainian cognitive linguist as Kononenko deals with the problems of conceptual analysis (*Kononenko, 2004: 12*). Russian cognitive linguists view the concept as a unit of the mental lexicon (*Kubriyakova, 1995: 151–154*).

From a philosophical point of view, a concept is a unit of thoughts consisting of two parts, the extension and the intension. The extension covers all objects belonging to this concept, and the intension comprises all attributes valid for all those objects. Hence, objects and attributes play a prominent role together with several relations, like, e.g., the hierarchical “sub concept – super concept” relations between concepts, the implication between attributes, and the incidence relation “*an object has an attribute*” e.g., the birds of prey describe a sub concept of the concept birds. The extent of this sub concept consists only of the eagle, the intension consists of the two attributes preying and bird (*Kubriyakova, 1995: 177*). That is why we consider analyzing different contexts of word usage and their correspondence to the dictionary entries of the word in question. Frequent and wide usage of definite context demanding the definite meaning makes the latter enter the definition of the word as a conventional meaning. It is also the reason for the dictionaries to present example sentences to clarify and justify the meaning explained.

3. Cognitive peculiarities of the concept of *Sacredness*

A model with social character is known to be superior to an individual one in accuracy, flexibility and range. The linguistic model of the word forms a type of relation of Man to the world. Basic categories building the model (time, space, change, cause, number) precede the ideas and outlooks. Philosophy discloses the objective reality of the world and existence of Man richness of human feelings and plays a great role in the conscious determination of relationships of Man with Nature. Linguistic world image is a mode of reflection of reality in the consciousness of human being: it means perception of this reality through the prism of linguistic, cultural and national peculiarities; peculiar to a certain linguistic group of people; it is an interpretation of the other world while following the national conceptual and structural canons.

The concept of cooperative communication involves an idealization that is not simply inherited from a methodological tradition in linguistics but primarily from our understanding of the concept of communication itself. In at least the Western cultural tradition, communication has a positive connotation in that it is believed to achieve a state that favourably affects human life. We often talk about successful communication, communication between generations as values in themselves. We seek to improved communication between people and nations, while situation leading to unpleasant consequences are attributed to lack of communication (*Deik, 1989: 146*). People are often accused of not being communicative if they cannot express themselves adequately. Even language teaching in the last few decades, and second language, in particular, have been oriented towards developing communicative abilities or skills. In many academic establishments communication studies are prioritized, while mass and electronic

media have pronounced communication their ultimate goal. It is probably this positive connotation of communication that links to the concept of cooperation, even though it is clear that communication does not always achieve cooperation.

The idealized cognitive model of communication involves the intentional, effortless and cooperative transfer of ideas, thoughts and feelings between a speaker and addressee through a shared medium and to mutual benefit. As already mentioned, this model is highly culture-specific and it could not have been otherwise. It will be assumed that it essentially concerns the way we understand linguistic communication, but it may also apply to non-linguistic communication with slight alterations (e.g. concerning participant roles) that do not affect its idealized nature (Evans et al., 2006: 103–105).

Joyce's narrative simplicity is that powerful instrument with the help of which he shows reality and non-reality. The author mastered this technique over the years. The language of his work is simple, though he uses complex allegories, metaphors, and idioms. His message is also very simple and millennial: happiness is in us.

Concerning Stephen's eventual development of a theory of art or an aesthetic theory, he fully draws on this tradition. He uses two central doctrines of the church in this theory. First, he revises the doctrine into a way of imagining the relationship between art and the world it describes. When Stephen develops his theory, he thinks of himself as taking on the role of a "priest of eternal imagination, transmuting the daily bread of experience into the radiant body of ever living life." The second use of Catholic doctrine or tradition relates to its creation of priesthood, a class of men separate from the world who act as intermediaries between the Deity and the people. In Stephen's idea of the artist, he is priest-like, performing the miracle of turning life into art.

One of the most important and necessary parts of the creative process of the human is acquiring knowledge: "... he knew of more ways of extortion than I could tell in two years" (Joyce, 1996: 28). "He would rather have had at his bed's head twenty volumes of Aristotle and his philosophy, bound in red or black, than rich robes or a fiddle or gay psaltery" (Joyce, 1996: 36). "Gladly would he learn and gladly would he teach" (Joyce, 1996: 52).

Faith is the principal phenomenon of the concept of *Sacredness*. As a part of the whole, *faith* stands for the universal power against the whole world. *Faith* is the whole that serves for the part of this world, for the person. So, the person, and especially his heart is that container for the content "*faith*" that struggles for eternal ideas of good and justice. But *faith* is not separated from the world, it exists in this world and the place for its fighting is the world itself. And the exact place for this struggle we find in the human's heart. The results of this invisible fighting could be controlled by the human's heart only, whether it fails or wins. So the *faith* causes the effect of never-ending struggle and keeps the hope in a person's power alive. It is emphasized by the contextual contradiction "*faith and the whole world*". The Longman Dictionary gives the following definition of 'faith': *strong belief; (loyalty to one's) word of honour; promise; (a system of) religious belief, religion* (Longman, 1992: 214).

The author expresses his own attitude to the category "*faith*" in the following lines: "He was a faithful and a good toiler, living in peace and perfect charity" (Joyce, 1996: 34). "An evil-doer should not hope for good deeds" (Joyce, 1996: 126).

We can find many expressions, which emphasize the author religious belief. For example: "Many of people are so stern of heart that they cannot weep, though they suffer sorely; therefore, instead of weeping and praying, men may give silver to the poor friars" (Joyce, 1996: 19). "a good man of religion, a poor Parson, but rich in holy thought and deed" (Joyce, 1996: 54). "May Jesus Christ bless you, and all his handiwork, great and small!" (Joyce, 1996: 34).

"Pray you all not to take it badly, though I may make a fool of him" (Joyce, 1996: 46). "I pray to God, may his neck break! He can well see a stick a sliver in my eye, but cannot see a beam of wood in his own" (Joyce, 1996: 75). "Madame, may God give you joy!" (Joyce, 1996: 98).

Let us clear up another category of the concept of *Sacredness*, i.e. *friendship*. It is also, without any doubt the universal phenomenon that appears between people and is something that everyone subconsciously gets as *sacred*. The Longman Dictionary defines *friendship* in such a way: *friendship* (an example of) the condition of sharing a friendly relationship; feeling and behaviour that exists between friends; true friendship is worth more than money (Longman, 1992: 245).

As part of the whole *friendship*, it is a certain state which can appear in the relationship between people. On the other hand, it is the whole that should combine certain qualities of the attitude of one person towards the other, so that it could be named as "*friendship*". The category of *friendship* contains positive content, and brings the understanding of the *sacred* of this phenomenon depends on a person's personal features. The essence of *friendship* could contain only good, to some extent only sacred things; we understand under the good things something that brings the person the good. We may also say that a person could be a friend or an enemy to himself personally. Then we speak about the place for the existence of this category, if it concerns one person only and his or her attitude towards himself/herself, then the place for such a category will be in human's mind and heart. But if *friendship* is the act of a relationship between more than one member, it will find its place in the social understanding of this category. *Friendship* is controlled by the inner state of the human's mind; the person's feelings control the existence of *friendship*. Subconsciously the person defines the social circle which is friendly for him.

The human being is such a creature that being influenced by the inner world could create the own image of things. When things don't go as the person wishes, he or she begins to dream of possible ways of going on things. So we speak about the *dream*, the other category of the concept of *Sacredness* that creates only positive images in the human's mind. When we hear the word "*dream*" in our mind appears the feeling of something pleasant and sacred but unreal, something that will never come true, wished but unrealizable.

The Longman Dictionary gives the following definition of the word "*dream*": *dream* 1) a group of thoughts, images, or feelings experienced during sleep or when the mind is not completely under conscious control; 2) a state of mind in which one doesn't pay much attention to the real world; 3) something imagined and hopefully desired; 4) a thing or person notable for beauty, excellence, or enjoyable quality (Longman, 1992: 184).

As the container of the good context *dream* is one of the most unique categories that absolutely is understood by everybody as the bringer of positive emotions and thoughts, which are usually mixed up with the feeling of never coming true. "... *trust were to be foul, it is no wonder that an ignorant layman would be corrupt...*" (Joyce, 1996: 49). "... *may they come to the best of bad ends!*" (Joyce, 1996: 56). "... *in his house, it snowed meat and drink, and every fine pleasure that a man could dream of*" (Joyce, 1996: 66).

By reading James Joyce's novel, we get a clue that there are two reasons that would not let our dreams come true. In most cases, they seem to be unreal, and sometimes as a result of sudden change, people understand that the *dream* is possible, when you are not waiting for its successful fulfilling. So the positive category of the *dream* always goes along with the negative category of *fear*. If we consult the Longman Dictionary we will find the following notes, written about the word "*fear*": *fear* 1) the feeling that one has when danger is near; the feeling that something (usu. unpleasant) is likely to happen: I couldn't move

for (=because of) fear; 2) No fear! (in answer to a suggestion that one should do something (Longman, 1992: 220).

Fear by nature is something bad, or something that causes bad feelings, that influence the person's life on the subconscious level. The category of *fear* however is written in human's life and exists in it. It depends on the person himself, on the strength of his character, how deep this feeling is. Speaking about "*A Portrait of the Artist as a Young Man*", we find the arguments that prove that the category is universal and without any exclusion is natural for a man.

According to causes of the change, this is external, historical, social, cultural, and technological; it doesn't depend on the kind of society or the nation. Such factors cause only the degree of the *fear* but the *fear* itself is an overwhelming psychological category as a whole, which in the novel by James Joyce is depicted with exaggeration, emphasis and expressiveness. This is at the same time the part of human's unhappiness and a source of bad thoughts and evil emotions. The place for its effect is in the human's mind and it causes the feeling of despair. This category is shown with great tension. For example: "...every guilty man should fear the church's curse, for it will slay, just as absolution saves, and also let him beware of significance..." (Joyce, 1996: 45). "May Saint Antony's fire fall on their bodies!" (Joyce, 1996: 87). "... began to cry aloud and was nearly mad; for she knew not what it signified, but only called out for fear and so wept that it was pitiful to listen..." (Joyce, 1996: 89).

And when the person overcomes his *fear*, at last, the *struggle* begins. The *struggle* is in the human's soul which later displays in the external acts. While hearing the word *struggle* we imagine coming through difficulties and fighting against somebody (something) for something. Let's see how the Dictionary interprets the word *struggle*: *struggle* – to make violent movements, esp. when fighting against a person or thing; the *struggle* is a hard inner fight or bodily effort (Longman, 1992: 607).

Though the meaning of the word "*struggle*" may be associated with something bad, in the author's understanding, it is the process necessary for people to better understanding them. The *struggle* has no restriction; it is external as well as internal category. The author makes stronger ascent on the inner world struggle: he means the struggle in the heart and soul of the person: "He was as if I shall give him a full praise, a thief and a summoned, and a pimp" (Joyce, 1996: 65).

This is the *struggle* between love and hate, charity and miserliness, honesty and falsehood, and it is endless. Considering this we can see that inner struggle displays in external human's deeds and has a great influence on life.

That's why that category *struggle* is closely connected with the category *life*: life 1) the action force that enables (animals and plants) to continue existing; 2) living things; 3) human existence; 4) the period during which one is alive; 5) a person: several lives were lost (=people died) in the accident. 6) activity; movement; 7) a person or thing that is the cause of enjoyment or activity in a group; 8) also life imprisoned; 9) also life – a written, filmed or another account of a person's existence; 10) not on your life! 11) Take one's (own)/someone's life to kill oneself/someone (Longman, 1992: 348).

In his "*A Portrait of the Artist as a Young Man*", Joyce expresses his thoughts about uselessness and complexity of his own life: "... a long span of youth after it first begins to spring, and, as we may see, has so long a life, yet at last it wastes away " (Joyce, 1996: 76). "Men should wed accordingly to their own station in life, for youth and age are often at odds" (Joyce, 1996: 89).

But *life* is the category that goes side by side with the category of *death*: death 1) the end of life; time or manner of dying; 2) the end or destruction (of something not alive): a defeat that

meant death of all my hopes. 3) put to death to kill, esp. with official permission; 5) to death beyond all acceptable limits (Longman, 1992: 173).

In his works, the author often resorts to such category as *death*, for example: “*I am dying in my own death and the deaths of those after me*” (Joyce, 1996: 57). “*I know the voices dying with a dying fall...*” (Joyce, 1996: 99). James Joyce pondered over this phenomenon, the place it in human's life and it displays in the following words: “*Man may die of imagination, so deep may the impression be*” (Joyce, 1996: 121). “*...even if we die by torture, shall either of us hinder the other in love or any case...*” (Joyce, 1996: 76).

Death, as a whole, is the category of evil. That is the container of bad emotions that appears in one's mind while hearing the word “*death*”. The same we can notice in the author's understanding, *death* is a terrible phenomenon; it is the end of human's being: “*... death is an end to every pain and grief in this world*” (Joyce, 1996: 154). “*With that word his speech began to fail, for from his feet up to his breast had crept the cold of death that had vanquished him; and in his arms likewise the vital strength was lost and entirely gone*” (Joyce, 1996: 118).

But, at the same time, he interprets *death* (the end) as the beginning, beginning of the other form of human's being. “*Death drew out the tap of life and let it run*” (Joyce, 1996: 88). “*He cannot flee it [love], even if he should die, whether she is a maiden, married, or widow*” (Joyce, 1996: 114). Maybe, James Joyce's religious belief served as a base of such understanding and interpretation of this category. We can find the confirmation of this thought in the following lines: “*Well has Fortune cast the die for you, who have the sight of her, as I only have the absence!*” (Joyce, 1996: 123). For James Joyce *death* is closely connected with such a category as *birth*. “*Here comes my mortal foe; without fail, either he or I must die ...*” (Joyce, 1996: 144).

Death is the end and *birth* is the beginning, and as was said before, James Joyce considered the end to be the beginning and vice versa. In his “*A Portrait of the Artist as a Young Man*,” James Joyce wrote about the *death* of such important things for human's being as air, earth, water and fire. To our mind, a person can write such statements only when he had lost his hope. Only this feeling (*hope*) keeps us alive, helps us to feel happiness and comfort in life, but as we see, the author didn't feel these any more.

Let's consider the category *hope* as it is connected with the categories *life* and *death*. The human's mind is supported by *hope* and when people lose it, comes *death*, either physical or spiritual. *Hope* 1) the expectation of something, happening as one wishes; 2) a person, or a thing that seems likely to bring success; 3) hold out hope to give reason to expect; 4) raise someone's hopes to make someone hope for success, esp. when it is unlikely (Longman, 1992: 294). “*But I who am exiled and so barren of all grace and hope that neither earth, water, fire nor air, nor any creature made of them, can help or give me comfort, well may I die in distress and despair!*” (Joyce, 1996: 67). In the human's mind, *hope* is something positive. We are different; some people hope for something, some do not. It depends on a person; anyway, *hope* plays a great role in our life.

4. Conclusions

So, we may conclude that James Joyce's understanding of *Sacredness* makes the reader think over it. Everything has its double nature and we always have a chance to consider what *Sacredness* is for us. When new ideas are expressed in terms of familiar information, then both the new knowledge is conveyed and desirable intelligibility is achieved.

We have presented the main types of conceptual analysis, namely content analysis, formal concept analysis, conceptual modelling. We consider that the combination of the formal concept analysis and the internal conceptual analysis could reveal the entity of the concept deeper and more thoroughly. Hence the analyst is to consider both the contents of the concept and its synonyms, forming the hierarchical system. The central item of the system is the analyzed concept. The other elements are systemized according to their relations with the concept in question.

It follows from the functionality involved in the urge to comply with communicative challenges that neither the actuation of semantic change in the synchronic communicative-cognitive interaction between interlocutors nor its spread as the diachronic conventionalization process in the speech community is explicable without reference to usage. On the one hand, a language that is not used does not change and on the other, the only tangible sign of change is that a language has come to be used differently by its speakers over time.

Thus we have tried to show how semantic change is connected with the cognitive and pragmatic processes in the minds of individual speakers. Cognitive processes play a role in the actuation of semantic change when speakers modify conventional meanings by resorting to various cognitive mechanisms in order to meet changes in communicative and cognitive needs.

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LIVES OF SAINTS IN THE EARLY MIDDLE AGES, AS A HISTORICAL SOURCE IN THE RESEARCHES OF L.M. BERKUT

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Summary

Leonid Nikolaevich Berkut (1879-1940), an outstanding Ukrainian medievalist. He studied the Western European medieval historiography and culture.

L. Berkut's research considers in this article, which dedicated to the Christian hagiography of the pre-Merovingian and Merovingian periods in Western Europe. Despite the special specificity and tendentiousness of the hagiographic material, L. Berkut was not a skeptic in the matter of using the lives of the saints as a historical source. For the Ukrainian professor, the lives of the saints, as well as the Christian legend, revealed the social and spiritual picture of medieval society and they were a special area of socio-cultural research.

Trough his own research, the professor makes it clear to the reader that the genre of hagiography itself always has a certain pronounced specificity. The main task of the hagiographer is not to provide a historically accurate biography, but to create an image of a person who has achieved holiness and serves as a role model for others. Therefore the author deprived his hero of individual "earthly" traits and left him in the form of a supernatural "heavenly", legendary, mythical role. In a hagiographic work, first of all, a certain "ideal of holiness" plays a role, and then specific information about the character's life. Therefore, a researcher, when studying this kind of sources, must be able to separate one from the other.

Do not forget that the biography of saints occupied a special place in medieval literature. For the majority of the population of medieval Europe, hagiography was the main source about the Christian picture of the world, the relationship between the earthly and the heavenly, about the influence of providence in everyday life.

Keywords: L. Berkut, lives of saints, Christian legends, miracles, the Middle Ages, hagiography, historical-critical method.

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1. Introduction

Hagiography (agios from Greek holy grafo – I am writing) is a section of literature that combines the biography of Christian ascetics who canonized, and various miracles, visions, words of praise, about the acquisition and transfer of relics. (*Afinogenov, 2008: 283-345*).

The earliest type of hagiographic literature arose during the period of persecution of Christians in the 1st-4th centuries. The stories about the martyrs were created not only to spread their veneration, but also to strengthen the spirit of other believers during the period of persecution. (*Berkut, 1911: 69*).

These early hagiographic legends include the so-called "acts" and "martyrdom". The first should be understood as the text, which is basically the protocol of the interrogation of the

martyr. Here, the interference of the literary editor is practically not felt. However, it should be noted that the “acts”, in a pure form, have practically not preserved.

“Martyrdom” (passio; suffering, torment) is a direct author's creation and may include not only the protocol of interrogation, or its retelling, but also the story of the feat of martyrdom, his arrest, imprisonment, trial, fortitude, execution. Examples of the most ancient martyr texts were the martyrdom of St. Polycarp of Smirnsky; the martyrdom of Perpetua and Felicitata and others ... (*Delee, 1908*).

The end of the persecution of Christianity in the second half of the 4th century led to a completely different type of hagiographic text – “Christian Life”, a consistent description of the life path of the saint. Now the main subject of description is the godly life, not the death of the saint.

Since the 12th century hagiography has been influenced by the chivalric culture, poetic and prosaic works about saints appeared, written in different languages with pronounced features of a novel. (*Paramonova, 2007:22-29*).

As a historical source, hagiography reflects not only a person's religious ideas about the world and religious ethics, but also affects historical events, reports information about the political and socio-cultural life of society. (*Adrianova-Peretz, 1962: 41*).

2. Main part

In medieval literature, the biography of saints occupies a special place. For the majority of the population of medieval Europe, hagiography was the main source about the Christian picture of the world, the relationship between Earth and Heaven, about the influence of Providence on everyday life. (*Klyuchevsky, 1871: 20*).

Starting from the 16th century in Europe, on the waves of the late Renaissance and at the beginning of the Reformation, a scientifically critical approach to hagiography, as a group of monuments requiring objective analysis, with the aim of further publication of verified texts, began to be developed. The most powerful breakthrough in scientific-critical hagiography was the work at the preparation of editions of the complete collection of Catholic saints “*Acta Sanctorum*”, begun by the Catholic monk of the Jesuit order – Heribert von Roseweid. After his death in 1624, this work was continued – by John Bolland (1596-1665) and further successors of his work, so-called “Bollandists”. In the period of the XVII-XX centuries, Bollandists, have published over seventy volumes of hagiographic monuments (*Knowles, 1963: 3-32*).

The historical-critical method of the Bollandists was distinguished by a special scientific scrupulousness. They studied a huge historical layer of various kinds of legends and myths, and set the time for compiling individual versions. The scientific research of the Bollandists proceeded from the thesis, the understanding of holiness as a kind of internal spiritual phenomenon, perceived and defined only in the sphere of supernatural or church life ...

A new milestone in the understanding of the hagiographic heritage was brought with “romanticism”, which saw in this literature the “best of folk poetry” helping to define, examine, and penetrate the state of mind of a medieval person. (*Donchenko, URL: <http://cheloveknauka.com>*).

The next stage in the study and analysis of hagiographic material was included it in the same category with historical sources.

Accordingly, the criteria of modern scientific historical research have been applied to these works, and the literary and philosophical nature of the texts themselves began to be completely ignored. Since this kind of material did not always meet the requirements of critical

analysis, it was automatically included in the category of moralizing literature, which has no special scientific value from a historical point of view.

Representatives of this trend were the well-known publishers of the lives of saints of the Merovingian era – B. Krusch and V. Levison. Criticizing legends, the researchers have tried to rationalize miracles, finding them scientific justification. (*Krusch, 1888-1910; Levison, 1927: 1*). The method that was proposed by B. Krusch and V. Levison was based on a stylistic analysis of sources and, on a purely philological basis, provided an opportunity to determine the historical and chronological homogeneity of legends and lives, absolutely excluding the philosophical specifics of medieval literature ...

The hypercriticism in the editions of Crusch and Levison has caused a lot of controversy, particularly by the pro-Catholic authors, finding responses in Catholic apologetics. The most significant for this topic are the fundamental works by the French abbot, professor of the Free University of Paris, Louis Duchenne (1843-1922) and his: “Origines du culte chrétien” (Origins of Christian worship), in collaboration with another Italian professor de Rossi, a critical publication of Jerome martyrology.” (*Duchesne 1920*).

In this polemic, it is impossible to note the representative of the new Bollandian school – I. Dele, who outlined the completely new ways of the research before hagiography.

Delay's pioneering work is the development of a multi-level system of research of the “lives of the saints” based on the verification of a number so-called “hagiographic coordinates”, data that can be studied objectively: 1) analysis and characteristic of the ancient sources, 2) study of the cult of veneration, 3) verification for compliance with historical reality.

Dele, following the predecessors of the “Bollandists”, tried to clear the text from so-called “spreading cranberries” – stories about the supernatural, was written on earlier prepared template of an hagiograph. (*Delaye, 1905*). For Delay, the people themselves are the true holders of the entire legendary tradition in hagi-literature. Gradually, this idea was cultivated and spread in the works of scientific historians and literary critics K.G. Loomis and G. Gunther trying to consider everything “legendary” in the lives of the saints in terms of folklore (*Bondurand, 1887*).

A lively discussion in European scientific circles of the XIX-early. XX century, caused by the desire to find a new meaning, in texts of a religious nature, could not leave aside the Ukrainian scientist – medievalist, an excellent connoisseur of the history of European culture L.M. Berkut.

His work “Christian Legends and Lives of Saints” (*Berkut, 1911*) is one of the first scientific works devoted to Western hagiography of the pre-Merovingian and Merovingian times of the V-VIII centuries.

Methodologically, this essay is divided into two parts. In his work L. Berkut uses hagiographic material of the Merovingian legend, published in such authoritative series as the hagiographic reference book published by the Bollandists “Bibliotheca hagiographica latina antiquae et mediae aetatis” Brussels 1899-1901 (Bibliotheca hagiographica latina URL: [archive.org ›details](http://archive.org/details/bibliotheca_hagiographica_latina_antiquae_et_mediae_aetatis)) biblioth), and the works of the famous German historian and source researcher W. Watenbach “Historical sources of Germany in the Middle Ages until the middle of the 13th century, and also an alphabetical list of B. Krusha of the Merovingian era (470-750), and making reservations, referring to the criticism of the Abbott Duchenne, having found it in most cases quite substantial and equitable. (*Deutschlands, 1858 URL: http://www.mgh.de/bibliothek/opac*).

In the first part of his work L. Berkut from the whole mass of legends of the pre-Merovingian period singles out one as especially important: “Passio Sanctorum Quatuor Coronatorum”. This legend, writes L. Berkut, tells about 4 Christian martyrs, the workers of the Pannonian quarries, who converted their comrades and they were martyred to Christianity.

The main thing here is the answer to the question: how did Christianity spread in the border southeastern regions of the empire? "... there were not so much missionaries in the proper sense of the word, but various ordinary people – masons, soldiers and itinerant merchants, and their missionary activity was unchanged" ... Passio ss. Quatuor Coronatorum, undoubtedly has a historical significance, its first compilation is written by L. Berkut – dates back to the time before the influx of barbarians into Pannonia. "Life in quarries is depicted in it with such clarity and knowledge of technical expressions that its compiler, undoubtedly, should have had personal observations and information" ... (*Berkut, 1911: 7-8*).

A stunning and, in its historical importance, completely exceptional picture from the era of the collision of Christianity has already been organized in the southern Dunajskih lands with the paganism coming there is given by the life of St. Severin. (*Vita s. Severini abbatis et Noricom apostoli +482*).

For the first time in Comagen, inhabited by the Romans, this city was located near Tyuln (modern Austria) – the image of St. Severin appeared. Nobody knew where he came from. By the language they saw him as Roman, from his accent he was from the East. He brought much comfort to the inhabitants of Noriki, always barefoot and abstinent, he was preaching throughout the country. Soon Severin gained special respect for himself, that even barbarian princes bowed before him, fulfilling his requests and following his advice. He led Odoacer to the conquest of Italy and foretold him rich booty and success for him. But still he could not save the country from the influx of savage barbarians who destroyed traces of Christian culture in Norik.

This life continues L. Berkut "significantly differs from other works of that era. It is simpler and more natural in its language and content, without a tedious set of words and carefully conveys the image of St. Severin" ... (*Berkut, 1911: 10*).

L. Berkut devotes the next part of his work to a brief analysis of the Lives and Sufferings of the saints already in immediate Merovingian period. From the enormous amount of material it should be noted: "Lives of the saints of the royal blood", barbarian kings and queens of the VI-VII centuries. Although these works were written and edited much later during the Carolingian period, nevertheless they have a cultural and historical value. In addition to describing various legendary images and legends, it also contains a number of legal documents in the original.

The Life of St. Columban and Gallus deserves special attention.

It tells the story of a Christian mission in southern Germany during the early Middle Ages by Irish or Scottish monks. L. Berkut writes: "The very nature of the missionary activity of the Iro-Schott monks would remain for us a vague historical mystery if we did not have in our hands the precious life of St. Columban". He was the first Irish monk to enter southern Germany as a historical figure. (*Berkut, 1911: 18*).

The saint was born c. 530 in eastern Ireland, then entered the Bangor Monastery and at the end of the VI century. with the permission of the abbot, together with 12 companions, St. Gaul was among them, went to the continent to the state of the Franks. Despite various difficulties and setbacks, the Frankish kings Clothar II and Theodebert received him with full respect, and at their insistence, he went as a missionary up the Rhine, where he later chose Bregenz in Alemannia for his stay. In 612, Kollumban moved to the Lombard state, where he was received by Theodelinda, and where he later founded the famous Bobbio monastery.

Saint Gall stayed in Allemania, here he fought a lot against paganism, later he also founded the S. Galen monastery. L. Berkut writes about his life, there is "very important and extensive literature". (*Berkut, 1911: 19-20*).

A similar role was played by St. Collumban and Gall in the life of the Christian mission in southern Germany took over St. Amand (+676). A native of Aquitaine, he preached among

the Slavs and Basques, and also founded the Maastricht bishopric. *Viva s. Amandi* according to L. Berkut: “deserves all attention and trust.” (*Berkut, 1911: 20*).

Finally, the life of St. Bonifatius (VIII century) “the apostle of all Germans” – the founder of the new Frankish church, who united the individual actions of his predecessors into one whole organization and, in alliance with the Carolingian house, created a powerful building of enormous cultural and historical significance. His life is written by L. Berkut, “it was written shortly after his death, perhaps even during the life of Pippin the Short, by one of the Mainz presbyter Willibald”. Unfortunately, this extensive biography suffers from a common vice for all hagiographic literature: reality is not always reflected, a lot of details often invented, the author rushed to depict the end of his hero's life – his martyrdom. (*Berkut, 1911: 33*).

However, despite all the shortcomings, this does not detract from the historical significance of the personality of St. Boniface, his contribution to the educational process of his time (author of grammar and metrics), as well as important correspondence with various statesmen and Roman high priests.

Summarizing the significance this work, as a conclusion we will display the following points:

Being a fruitful researcher of the early Middle Ages, when the ancestors of modern peoples appeared in the vast territories of Europe, L. Berkut did not ignore the important issue of introducing new “barbarian aliens” to Christian culture and religion.

Searching for the formation of the foundations of the culture of medieval Europe, L. Berkut drew our attention to the history of Christianity in central and eastern Europe and its role in the reorganization of the spheres of social life in the society.

Being well informed with the methods of critical hagiography and textological criticism of Western scholars of the XIX – early. XX Art. – V. positivists Watenbach, Br. Krusha, the Italian meter de Rossi, L. Berkut, treated hagiographic material as a valuable and significant source that helped to determine the authentic features of Western European culture in the Middle Ages.

For the professor, a Christian legend (epic poetry, local legends, fantastic images) and the lives of saints could tell about the social picture in the society, about the life of various segments of the population that are practically not mentioned in other earlier sources, for example: the little-known life of the workers in the Pannonian quarries before V Art.

3. Conclusions

Studying hagiography before the Merovingian and during the Merovingian period, L. Berkut touched upon the following important theoretical issues:

- features of the process in spreading Christianity among the Germanic tribes;
- finding out the degree of relationship and interpenetration of folklore and the Merovingian hagiographic legend;
- the significance in the veneration of the cult of saints in social and cultural life in the Merovingian and pre-Merovingian society.

For L. Berkut, the lives of the saints of the period under review, certainly, contain some non-hagiographic elements: epic songs, ancient pagan legends, German legends, but the external similarity should not mislead the researcher. L. Berkut in his work made fundamental distinctions among legend, folklore, myth and Christian hagiography.

Using historical and critical methods which developed by Western positivists to identify non-hagiographic elements, L. Berkut left the figure of the saint unchanged- a real historical person.

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EXPERIMENTAL VERIFICATION OF THE EFFICIENCY OF PRESCHOOL SPECIALISTS FOR PEDAGOGICAL INTERACTION WITH INTERNALLY DISPLACED FAMILIES

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Summary

The article demonstrates an experimental verification of the effectiveness of preparing future preschool teachers for pedagogical interaction with the families of children of internally displaced persons. The levels of maturity of motivational-value, activity and cognitive components of the readiness of future preschool teachers for pedagogical interaction with the families of children of internally displaced persons have been analyzed. The author has specified criteria of the motivational-value component, as follows: a motivational orientation of future specialists within the professional activity, the availability of the formed readiness for using modern pedagogical technologies, a drive towards self-development and self-perfection in terms of the educational activity. An activity component of the readiness of future preschool specialists has been rendered through self-analysis of four groups of skills: projecting, organizational-pedagogical, activity-technical and reflexive-evaluative. The experiment control stage has aimed to prove the efficiency of the author's system of the formation of readiness of future preschool teachers by comparing and analyzing the data demonstrated by an experimental group (EG) and a control group (CG). The author has revealed the outcome of maturity of the motivational-value, cognitive and activity criteria at ascertaining and control stages of the study.

Keywords: professional activity, professional development, preschool children, pedagogical technologies, motivational-value, activity and cognitive components of readiness of future preschool specialists,

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1. Introduction

The issue of the preparation of future preschool teachers for pedagogical interaction with the families of children of internally displaced persons is relevant today. The anti-terrorism operation in the country's east affected the personal being, mental state, individual development of preschool children (for instance, there are problems in communicative and emotional realms, namely, mood disorders, unsociability, aggression, distrust of others, decreased speech coherence); there are noticeable changes in the lives of their families due to the challenges of forced displacement. As a result, they need an appropriate psychological-pedagogical aid of highly qualified specialists.

Therefore, higher education institutions (HEIs) face a critically important task – to have regard to the particularities of preschool institutions in terms of the training of preschool specialists. The abovementioned has necessitated the formation a model of the preparation of future preschool teachers for pedagogical interaction with the families of children of internally

displaced persons (IDPs), which the author experimentally tests for its effective introduction into HEIs.

The purpose of the article is to demonstrate the results of experimental verification of the process of shaping the readiness of future preschool teachers for pedagogical interaction with the families of children of internally displaced persons in the context of professional pedagogical education.

The author has outlined the following academic-research task:

1. To experimentally test the expediency of the mentioned model of shaping the readiness of future preschool teachers for pedagogical interaction with the families of IDPs for its introduction into HEI's pedagogical process.

The paper has used the research methods, as follows: data gathering (observation, survey), processing and analysis (qualitative and quantitative, their systematization and comparison), data generalization, statement of conclusions.

2. The main text

The future preschool teachers, who are students of different HEIs, joined the experimental and control groups.

The study of particularities of shaping the readiness of future preschool teachers for pedagogical interaction with the families of internally displaced persons started with the analysis of a *motivation-value component*. It encompasses the following criteria: the motivation orientation of future specialists within the professional activity, the availability of the formed readiness for using modern pedagogical technologies, a drive towards self-development and self-perfection in terms of educational activity.

Therefore, using Motivational Profile Questionnaire by Sh. Ritchie & P. Martin (*Sh. Ritchie, 2004*), the motivation orientation of future teachers was studied.

In particular, the basic professional needs of most students include: – social contacts (EG – 47,3 % / 126 persons; CG – 48,8 % / 117 persons); – influence and power (EG – 48,9% / 130 persons; CG – 50,3 % / 120 persons). The priority of the needs is combined with the necessity to stimulate their activity financially (EG – 62,2 % / 165 persons; CG – 61,4% / 147 persons); needs for establishing long-term stable relations (EG – 55,5% / 148 persons; CG – 56,2 % / 134 persons); laying the groundwork for comfortable working conditions (EG – 52,2 % / 139 persons; CG – 53,4 % / 128 persons).

The needs for constant search, transformation and use of innovation are traced in the answers of future preschool teachers in the context of a criterion “to be creative” (EG – 29,2 % / 78 persons, CG – 28,8 % / 69 persons). A drive towards personal growth (EG – 26,5 % / 70 persons, CG – 27,8 % / 66 persons) and a need for interesting, socially useful activity (EG – 25,4 % / 68 persons, CG – 26,8 % / 64 persons) are poorly expressed.

Consequently, the content of professional activity doesn't encourage the students for personal development, advancement of professional mastery, and a desire to engage in creative activities. Instead, dominant factors, which motivate them to delve into innovation, are convictions, attitudes, their relationship to modern pedagogical technologies as an effective way to improve the quality of pedagogical process in an education institution.

Based on self-analysis of future teachers, the research examined the motivational readiness for mastering and introducing innovation.

The author has developed “Analysis of Readiness of Future Preschool Teachers for Mastering Modern Pedagogical Technologies” following the Motivational Readiness Test by A. Mayer.

By relying on it, the author has found the following: most of the future preschool teachers have an average level of readiness to study and introduce innovations (EG – 68,8 % / 183 persons; CG – 67,3 % / 161 persons); low level (EG – 22,5 % / 60 persons; CG – 23,8 % / 57 persons), and a small number of students have a high level (EG – 8,7 % / 23 persons; CG – 8,9 % / 21 persons).

The students chiefly didn't show proficiency in mastering creative activity in the course of self-analysis and development, practical approval and application of various pedagogical technologies as well as participation in the activities of creative groups. Thus, an area of their professional growth is at the level of personal advancement, and the further development requires creating the relevant conditions to generate an enduring motivational interest, a craving for using modern technologies in work with preschool children.

Motivational readiness for mastering and implementing innovations is determined by students' aspiration to improve a level of readiness for pedagogical interaction with the families of children of IDPs, become better and grow in this sphere. The author used "Diagnostics of the level of self-development and professional pedagogical activity" by L. M. Berezhnova to set a level of aspiration of the experimental and control groups for self-perfection (Berezhnova, 2005).

According to the data obtained, half of the participants are predominantly characterized by an average level (EG – 64,5 % / 172 persons; CG – 66,2% / 158 persons) that is an index of the positive tendency towards professional self-realization; a lack of the actual desire to boost professional and personal development was found among the representative who had a low level (EG – 22,7% / 60 persons; CG – 23,3% / 56 persons); solely the fifth demonstrated a high level (EG – 12,8 % / 25 persons; CG – 10,5 % / 25 persons).

Following findings, the author established an unwillingness and a negative attitude of the future teachers towards perception and introduction of the new. Moreover, they prefer to conduct their activities by using conventional methods.

The results of quantitative and qualitative analysis of the experiment's ascertaining stage permitted highlighting such general tendencies as:

- the professional motivation of future teachers is caused by the demands for establishing social contacts, a need for moral and financial encouragement; the dominance of needs for participation in creative, socially significant activities aimed at the development of personal potential;
- readiness for mastering and implementing modern pedagogical technologies at an interest level;
- a positive attitude towards professional self-realization.

A level of students' knowledge of the essence, structure and features of the use of pedagogical technologies in preschool institutions was set at ascertaining experiment stage. Using the author's "Education Technologies Method", gaps in their knowledge were fixed. A low level of expertise in modern pedagogical technologies confirms the need for increased attention to the formation of the cognitive component during non-formal (intra-firm) and informal education of future educators. In particular, most students are not aware of the essence of the concept "Pedagogical Technology"; they can't name its types, properties and principal characteristics; they don't gravitate towards organizing activities with children at each step of realizing a particular technology. Thus, the mentioned issues were considered to be dominant in the preparation of future teachers for pedagogical interaction with the families of children of IDPs through using innovative technologies.

To determine the maturity of an activity component of technological competence, “Analysis of activity and personal development of preschool teachers” was applied for self-analysis of educators’ professional skills (the author’s modified version of the self-analysis method by S. Liebiedieva & L. Manievtsova).

An activity component of the readiness of future preschool specialists was rendered through self-analysis of four groups of skills: projecting, organizational-pedagogical, activity-technical and reflexive-evaluative.

The activity and cognitive components are logically connected. Limited knowledge of pedagogical technologies proves a low level of professional-pedagogical skills in terms of their use in preschool institutions.

The skills of projecting and modeling an educational process given modern educational technologies, their logical integration into different types of activity following objectives and tasks – taking into account age peculiarities of children – are the most challenging (EG – 45,4 % / 121 persons; CG – 48,8 % / 117 persons – a low level; EG – 38,8 % / 103 persons; CG – 40,8 % / 98 persons – an average level; EG – 15,8 % / 42 persons; CG – 10,4 % / 25 persons – a high level). For the most part, the students remove obstacles to goal setting and activity planning by picking up forms, methods and technologies according to age and individual abilities of preschoolers.

Activity-technical skills – to develop, test and apply modern pedagogical technologies – are poorly formed. Their indices are below: (EG – 43,3 % / 115 persons; CG – 45,2 % / 108 persons – a low level; EG – 45,4 % / 121 persons; CG – 42,8 % / 102 persons – average; EG – 11,3 % / 30 persons; CG – 12 % / 29 persons – high).

However, they acquired positive skills to create conditions for the development of children’s independence, initiative, creativity and organize joint, subgroup and individual forms of activity of preschoolers.

Consequently, empirical findings of the experiment’s ascertaining stage were obtained due to the use of questionnaires, tests, and self-analysis. As a result, it allowed specifying a level of technological competence – that consists of such core components as motivational-value, activity and cognitive – of the future preschool teachers.

Analysis results of the maturity of the above components made it possible to identify the general level of readiness of the future preschool specialists for pedagogical interaction with the families of children of IDPs. It is represented graphically in fig. 1.

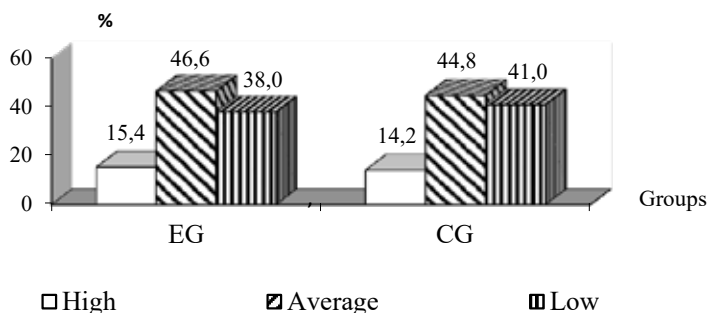


Fig. 1. Readiness of future preschool teachers for pedagogical interaction with the families of children of IDPs (ascertaining experiment stage)

The purpose of the experiment's ascertaining stage involved proving the effectiveness of the author's system of shaping the readiness of future preschool teachers by comparing and analyzing EG and CG data.

The author analyses the maturity of motivational-value, cognitive, activity criteria at the ascertaining and control stages of the experiment.

There are highlighted both quantitative and qualitative changes in the context of a motivational-value component. The students of an experimental group altered a system of needs that form the motivation profile of personality. The following needs became principal in professional activity: – personal growth and self-development (74,3 % / 198 persons); creative activity (64,8 % / 172 persons). In addition, the needs for accomplishing complex goals (47,8 % / 127 persons) and social goals (45,6 % / 121 persons) moved to the top. However, the indices of needs for influence and power (36,4 % / 97 persons), financial encouragement (37,7 % / 100 persons) and comfortable working conditions (24,3 % / 65 persons) dropped.

According to diagnostics, a group of needs for personal development, creative attitude towards activity, expansion of communication relationships takes a central place in the structure of a teacher's motivational profile. It is worth mentioning qualitative and quantitative characteristics almost didn't shift in the control group.

At the control study stage, there are positive dynamics of the readiness of future preschool teachers (EG) for studying and introducing pedagogical innovations.

The study of cravings of the future preschool teachers for self-development and self-perfection in EG showed a boost in the indicators of this characteristic at a high level (EG – 35 % / 93 persons); at the same time, their amount decreased at a low level (16,7 % / 44 persons). A basic amount is shown by the students at an average level (48,3 % / 128 persons).

Therefore, the obtained figures (fig. 2) confirm the positive dynamics of the maturity of a motivational-value component of the readiness of future teachers for pedagogical interaction with the families of children of IDPs in the experimental group and subtle changes taking place in the control group.

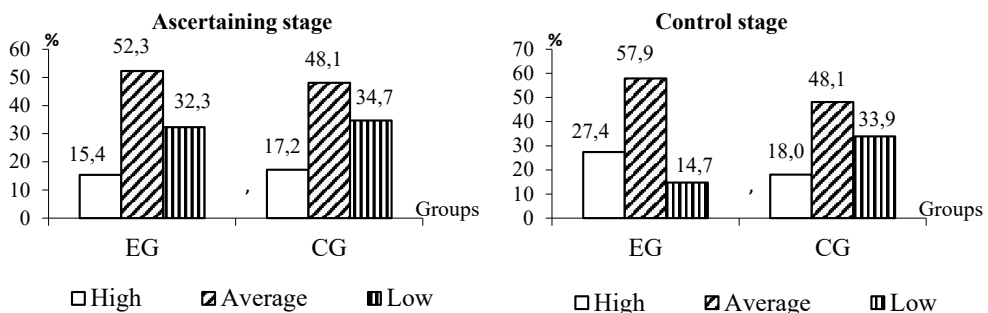


Fig. 2. Motivational-value component of the readiness of future preschool teachers for pedagogical interaction with the families of IDPs (EG and CG before and after the experiment)

The findings of qualitative and quantitative analysis of result indices of the maturity of a motivational-value criterion of the mentioned readiness prove the fact that the professional motivation of future preschool teachers is driven by the needs for self-development

and personal growth in the context of mastering and introducing modern pedagogical technologies.

The diagnostics of indices of a cognitive component indicate their growth: EG advanced a high level of maturity of a cognitive component by 16,3 % (43 persons), and CG – by 1,2 % (3 persons).

The data obtained are presented in table 1.

Table 1

The cognitive component of the readiness of future preschool teachers for pedagogical interaction with the families of IDPs (EG and CG before and after the experiment)

Maturity levels	Ascertaining stage of the experiment				Control stage of the experiment			
	Experimental group (n=266 persons)		Control group (n=239 persons)		Experimental group (n=266 persons)		Control group (n=239 persons)	
	%	persons	%	persons	%	persons	%	persons
high	15,4	41	17,2	41	29,7	79	15,9	38
average	52,3	139	48,1	115	47,0	125	51,0	122
low	32,3	86	34,7	83	23,3	62	33,1	79

According to the data of comparative analysis, the author states that most future teachers of the experimental group mastered the basic, systemic (a high level: 29,7 % / 79 persons) and required knowledge of modern pedagogical technologies (average level: 47,0 % / 125 persons).

The positive dynamics of maturity levels of an activity component of future preschool teachers of the experimental group are evident. The re-analysis of their skills vividly demonstrates 26,5 % (70 persons) reached a high level; their number decreased at a low level: 28,7 % (76 persons).

At the control stage of the experiment, the quality of shaped skills enhanced in all the groups. In particular, 26 % (69 persons) reached a high level of projecting skills, 64,2 % (171 persons) – average, 9,8 % (26 persons) – low. In the control group, the indices are nearly the same: a high level – 10,4 % (25 persons); average – 41,7 % (100 persons) and low – 47,9 % (114 persons).

Activity-technical skills are characterized by mastering of methods for the elaboration of methodological stuff (lesson plans, technological maps), creation of problem situations, cases to organize effective training. Organizational-pedagogical and reflective-evaluative skills assist educators in interacting and cooperating with children and their parents at all stages of realizing pedagogical technologies.

By referring to data obtained from self-analysis, the author marks the positive dynamics of maturity of an activity component among respondents of the experimental group and a lack of its maturity among respondents of the control group (fig. 3).

The data of analyzed dynamics of the variability of the maturity level of the mentioned readiness of future teachers at the ascertaining and control stages of the experiment are shown in table 2 and fig. 4.

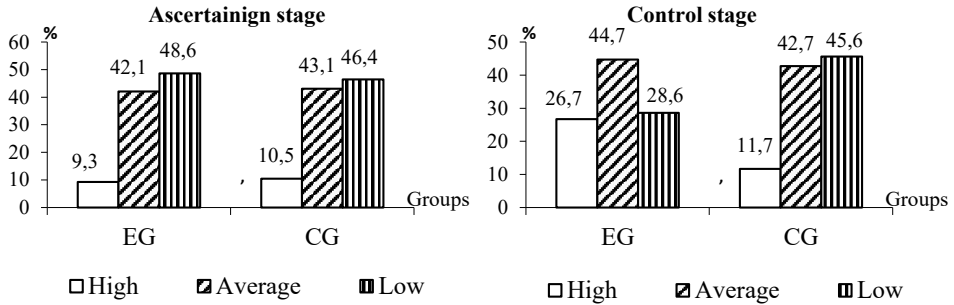


Fig. 3. An activity component of the readiness of future preschool teachers for pedagogical interaction with the families of children of IDPs (EG and CG before and after the experiment)

Table 2

Readiness of future preschool teachers for pedagogical interaction with the families of children of IDPs (EG and CG before and after the experiment)

Maturity levels	Ascertainign stage of the experiment				Control stage of the experiment			
	Experimental group (n=266 persons)		Control group (n=239 persons)		Experimental group (n=266 persons)		Control group n=239 persons)	
	%	persons	%	persons	%	persons	%	persons
high	15,4	41	14,2	34	33,5	89	15,9	38
average	46,6	124	44,8	107	48,1	128	45,6	109
low	38,0	101	41,0	98	18,4	49	38,5	92

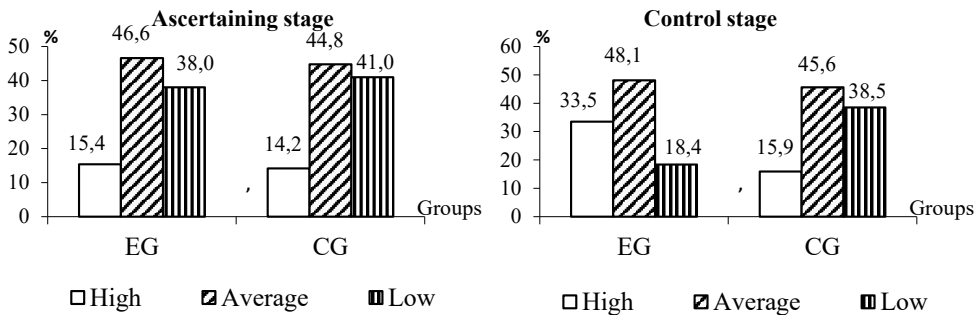


Fig. 4. Readiness of future preschool teachers for pedagogical interaction with the families of children of IDPs (EG and CG before and after the experiment)

The qualitative and quantitative analysis of indices of the maturity of readiness of preschool teachers demonstrates that indices of a high level of readiness increased by 18 % (66 persons) in EG; by 1,6 % (4 persons) in CG; indices of a high level in decreased by 19,3 % (71 persons) EG; by 2,8 % (6 persons) in CG.

The author ran a statistical check of data obtained after ascertaining the experiment stage through an F-test.

Data received are presented in table 3.

Table 3

Maturity levels of the readiness of future preschool teachers for pedagogical interaction with the families of IDPs (a fourfold table for calculating F-test, control experiment test)

Group	“It benefits” – 5-9 points		“It doesn’t benefit” – 3-4 points		Total:
	%	persons	%	persons	
EG	81,6	217	18,4	49	266
CG	61,5	147	38,5	92	239

Positive dynamics of the educational process in a preschool institution is the outcome of impartial quality assessment of the maturity of readiness of future preschool teachers for pedagogical interaction with the families of children of IDPs. The analysis of observations, talks with older preschoolers establishes that indices of socio-communicative development among future educators of EG increased compared to EG. Their annual gain in the high and average levels of EG is 5-6 % (CG – 1 %). Observations illustrate that 85% of future teachers of EG demonstrate shaped skills to work in a team, the ability to respect the interests and feelings of others; 93% of them (compared to CG – 73%) have high and average levels of maturity development that means a skill to conduct a dialogue, display communication initiative, form reasoned responses, formulate questions and join discussions; 86 % of them show the ability in making independent decisions based on their knowledge and skills.

3. Conclusion

Thus, the author’s model of shaping the readiness of future preschool teachers is effective and expedient to be introduced into HEI pedagogical process. Future educators engaged in all types of education – formal, informal (intrafirm), non-formal – express the positive dynamics of maturity levels of motivational-value, cognitive and activity components of readiness for pedagogical interaction with the mentioned category of people.

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REFORM OF THE UKRAINIAN SYSTEM OF GENERAL SECONDARY EDUCATION: TRENDS, CONSEQUENCES, CONCLUSIONS

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Summary

Three stages of implementation of the “New Ukrainian School” Concept are analyzed, namely: stage one (2018-2019), stage two (2019–2022) and stage three (2023–2029). It is determined that the educational environment of the New Ukrainian School is a multidimensional individualized self-organized integrity, saturated with all necessary components, which allows the individual within it to function properly and to develop his/her abilities, including gradual possibility of self-realization and personal growth.

The positive aspects of the education system reform have been identified, including the following: school autonomy; in-service training and certification of teachers; reform of the programs related to changing the forms and methods of teacher-student interaction and work; cooperation of central and local education entities with teachers and parents of students; improving the quality of education, which is identified as an “integrated educational process”.

The key tasks and objectives of a modern teacher, including the basic principles of traditional and modern education, are highlighted.

Keywords: reform, New Ukrainian School, elementary education, general secondary education, branches of education, competence, educational environment.

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1. Introduction

Modern strategies of Ukraine are aimed at further development of the national system of education, its adjustment to the conditions of socially-oriented economy, transformation and integration into the European and world-wide educational and scientific society.

Reform of the pedagogy of general secondary education involves the transition to the pedagogy of partnership between student, teacher and students’ parents, which requires thorough training of teachers in new methods and technologies of teaching, including information and communication technologies (ICTs).

V. Okon notes that education reform is a change in the content and organization of the system of education as a whole or some of its parts, associated with the transformation of socio-economic life of the country and the need to adapt it to the needs of educational activities (Okon, 1992: 174).

The analysis of pedagogical sources testifies to emergence of studies connected with research of development of competences during training of pupils (O. Lokshyna, O. Pometun, O. Savchenko and other) and designing the competencies of future specialists of higher educational institutions (HEIs) (O. Antonova, N. Hupan, O. Dubaseniuk, I. Ziazun, etc.).

2. Reform “New Ukrainian School”

In September 2017, the Law of Ukraine “On Education” (*The Verkhovna Rada of Ukraine, 2017*) was adopted, which defines the principles of the new Ukrainian education system, and in February 2018 the Cabinet of Ministers approved a new State Standard of Primary School (*The Cabinet of Ministers of Ukraine, 2018*) and taken into account the competencies necessary for successful self-realization of an individual.

The State Standard of Primary School specifies the cycles of primary education: the first cycle (grades 1–2) using an activity approach on an integrated basis with a predominance of game-based methods and integrated subject cycle (grades 3–4) with clearly identified key competencies.

For each educational field (linguistic-literary, mathematical, natural, technological-informative, social and health-preserving, civil and historical, artistic and physical education) the obligatory results and competencies of students are defined.

The new Law of Ukraine “On Complete General Secondary Education” (*The Verkhovna Rada of Ukraine, 2020*) was adopted, which reveals in more detail the changes introduced by the reform.

The new State Standard of Primary Education from the 2017/2018 academic year has been successfully tested in 100 pilot schools all over Ukraine. First-graders across Ukraine have begun studying according to the new standard since 2018/2019 academic year.

The new Standard of Primary Education provides for new approaches in the pedagogical activities of educators, thus during 2018–2019 a.y. there was a large-scale retraining of primary school teachers, for all of them received both distance and full-time training. Distance learning was conducted on the EdEra educational platform (*Onlain-kurs dlia vchyteliv pochatkovoї shkoly, 2018*). During the procedure new approaches and technologies were presented by qualified coaches.

Voluntary certification of teachers, which aims to identify teachers with a high level of professionalism, began in 2019 in order to promote their advanced educational methods and technologies, as well as conduct their dissemination among other educators.

The main principles of school education reform and the approximate schedule for its implementation are set out in the Concept of the New Ukrainian School (NUS). The paper provides information on the values of reform that a NUS graduate should possess. The implementation of the “New Ukrainian School” Concept is realized in three stages (*The Verkhovna Rada of Ukraine, 2017*).

Stage one (2018–2019 y.). At the first stage a new Law of Ukraine “On Education” was adopted, which included a new State Standard of Primary Education. Curricula and programs have been finalized in order to unload and introduce a competency-based and personality-oriented approach in primary school.

Training of potential textbook authors and corresponding editorial experts was introduced in order to inlay foundations of future new generation of educational literature. A national educational electronic platform for providing access to electronic textbooks has been created as a critical part of ongoing educational digitalization. The in-service training of primary school teachers is carried out annually. A national educational e-platform for e-courses, distance learning courses in curricula and a distance learning system for teacher training has been designed and tested, namely (*The Verkhovna Rada of Ukraine, 2017*):

– Ukrainian educational online portal for teachers “**Na Urok**” (advanced training takes place in the following areas: foreign language, critical thinking, creative thinking, integrated

learning, media literacy, inclusive education, psychology, cross-cutting skills, NUS, subject learning, project-based learning, educational institution work (*Ukrainskyi osvithnii onlain-portal dlia vchyteliv "Na Urok", 2021*);

– educational platform **"Osvitoria"** (areas of professional development: inclusion, innovation in education, distance learning, NUS, etc.; online courses, such as a creative course for teachers, which contained 5 "Take and do" classes) (*Osvitnia platforma "Osvitoria", 2021*);

– platform **PR "PROMETHEUS"** (presented a number of courses to improve the skills of teachers, namely: "Critical thinking for educators", "Educational tools for critical thinking", "Media literacy for educators", "Countering and preventing bullying") in educational institutions, "Design thinking at school", "Science of everyday thinking", "Implementation of innovations in schools", "New physical culture", "Ukrainian literature. Meaningful and rethought", "Starting to a successful school", "Science of teaching: what should every teacher know?") (*Platforma HO "PROMETEUS", 2021*);

– all-Ukrainian electronic platform **"AtomsHub"**. Advanced training is provided by participating in conferences on relevant topics (eg, "Effective interaction in education. Tools and techniques", "Ways to improve the professional competencies of professionals in today's conditions", "Pedagogical innovations and tools. Techniques for personal and psychological development" and etc.) (*Vseukrainska elektronna platforma Atoms, 2021*);

– remote platform of institutes of postgraduate pedagogical education **IPPO**, which is aimed at increasing the overall level of quality of pedagogical techniques, improving professional knowledge, skills and abilities. The advanced training is conducted through courses in the following areas: "School Director", "Deputy Director for Educational Work", "Methodist", "Practical Psychologist and Social Educator", "Teacher of Natural Sciences and mathematical disciplines", "Teacher of social sciences and humanities", "Master of industrial training", "Educator", "Head of the selectives", etc. (*IPPO Distance Learning Platform, 2021*).

Thus, training should include 150 hours and be conducted on an annual basis in five years. The Ministry of Education and Science of Ukraine has developed a procedure according to which budget funds allocated for teacher training are sent to public and private organizations that host in-service training courses. In order to motivate teachers financially the government has introduced voluntary certification with a free choice of service provider, which potentially gives the corresponding teachers 20% increase in salary.

Stage two (2019–2022 y.).

In September 2020, the State Standard of Basic Secondary Education was approved (*State Standard of Basic Secondary Education, 2020*). The Recommendations of the European Parliament and the Council of the European Union "On Core Competences for Lifelong Learning" (2006) set out the key competences to be followed by the common standards (*The Verkhovna Rada of Ukraine, 2006*).

The European Council declared the need to identify the new skills acquired during the lifelong learning process within the European framework in Lisbon (2000). Therefore, on Europe's path to globalization the main value is determined – the people, thereafter these conclusions were endorsed at the European Council meeting in Brussels (2005). The EU Lisbon Strategy, which was correspondingly adopted in 2000, has responded to the challenges of globalization and the demands for further development of society.

The State Standard of Basic Secondary Education indicates the cycles of secondary education: adaptive (grades 5–6); the basic cycle of subject-based education (grades 7–9); identified

key competencies (Table 1). According to each branch (linguistic-literary, mathematical, natural, technological; informative, social and health-preserving, civil and historical, artistic, PE) the learning outcomes are determined.

3. Competencies of lifelong learning

Table 1

Main competencies of lifelong learning

Main competencies of lifelong learning (European Union)	Key competencies of elementary education (Ukraine)	Key competencies of general secondary education (Ukraine)
<ul style="list-style-type: none"> – ability to communicate in the native language; – ability to communicate in foreign language(s); – knowledge of mathematics and general knowledge in the field of science and technology; – digital media interaction skills; – training for the purpose of acquiring new knowledge (keeping the present knowledge up-to-date); – social and civic skills; – initiative and practicality; – awareness and self-expression in the field of culture. 	<ul style="list-style-type: none"> – fluency in the state language; – ability to communicate in native (in case of difference from the state) and foreign languages; – mathematical competence; – competencies in the field of natural sciences, engineering and technology; – environmental competence; – information and communication competence; – lifelong learning; – civic and social competencies; – cultural competence; – entrepreneurship and financial literacy; – innovativeness. 	<ul style="list-style-type: none"> – fluency in the state language; – ability to communicate in native (in case of difference from the state) and foreign languages; – mathematical competence; – competencies in the field of natural sciences, engineering and technology; – environmental competence; – information and communication competence; – lifelong learning; – civic and social competencies; – cultural competence; – entrepreneurship and financial literacy; – innovativeness.

The identified key competencies that Ukrainian school graduates need to master almost coincide with the key competencies established by the European Lifelong Learning Reference System (2006) (*Lokshyna, 2019: 21*); “innovativeness” key competence promotes the development of students’ creativity, which provides the ability to respond to change and overcome difficulties, as well as encourages openness to new ideas and initiative in the classroom, educational institution, family, community, etc.

The key competence “initiative and practicality” is the ability of an individual to put ideas into practice. It includes an innovative approach, creativity, the ability to plan and organize projects. These skills greatly improve not only everyday life, but also enhance the workplace and determine the work environment, as well as allow an individual use the available opportunities (*Pavlenko, 2020: 7*).

The modern teacher modernizes the content component, changes the forms and methods of interaction with students, he/she uses a set of personality developing tools: methods aimed at improving the creative and analytical thinking, problem-solving and idea-generating, etc. (*Pavlenko, 2015: 148*).

Required knowledge regarding initiative and practicality are the following:

- ability to identify available opportunities for personal life and professional activities;

- ability to assess the overall condition of the environment in which people live and work;
- ability to be engaged in entrepreneurial activity;
- ability to plan, organize, manage, analyze, evaluate, interview, communicate;
- ability to effectively represent and negotiate;
- ability to work alone and as a part of a team;
- ability to assess and identify the strong and weak points of oneself and the coworkers;
- ability to assess the situation and take necessary risks.

The practical approach is characterized by innovation, creativity, independence in both personal and social life (*The Verkhovna Rada of Ukraine, 2006*). The principles of the innovation strategy of the European Union (“Europe 2020» Strategy) are set out in numerous documents of the European Commission.

There have been changes in the assessment system at the New Ukrainian School: in the first and second graders do not receive assessment marks, thus scoring system is introduced since the third grade and is exploited up to the last one. Therefore, the Student Achievement Certificate (SAC), which represents a descriptive model for assessing students according to the 51 indicators, has replaced primary school certificates.

SAC is filled in by the teacher in accordance to four levels of assessment: “has significant success” (the highest grade), “demonstrates significant progress” (major higher grade), “achieves results with the help of the teacher” (medium grade), “requires significant attention and assistance” (the lowest grade). In the first part of the certificate, the teacher assesses the student's social and work competencies. For example, whether the child was active in class, asked questions about something new and incomprehensible, showed independence in work, and/or resolved conflicts peacefully. The second part contains grades on various subjects. However, academic achievements are formulated in a non-standard way, namely: e.g. to what extent the student “is interested in the topics studied, shows curiosity about the world around him” (subject I explore the world), or “follows the rules of communication: greetings, farewells, thanks, requests, questions” (subject Ukrainian language), or “focuses on space, explains the location of objects” (Mathematics), or “adheres to the established conditions and rules of the game” (Physical Education).

The Concept of the New Ukrainian School bans grades announcement in front of the class, for this information remains available only to the student and his/her parents and is treated as personal details. The teacher does not have the right to announce the exact number of points the pupil obtained, only substantial achievements can be described. There have also been changes for admission to the NUS institutions, namely: admission interviews have been canceled. First graders of the New Ukrainian School are required to register with one of the schools they chose. Schools do not have the authority to arrange interviews, competitions, tests, exams or any other forms of public evaluation. Corresponding legal paperwork has been in effect since 2018 and caused a lot of controversy, as the opportunity to choose a primary school has narrowed significantly. However, the Ministry of Education and Science hopes that in this way all students will be guaranteed equal rights, regardless of the social status of the family (*The Ministry of Science and Education of Ukraine, 2016*).

First-graders of the New Ukrainian School are not given homework, all tasks must be done during academic hours. Nevertheless, second-graders should spend no more than 45 minutes on homework, third-graders have a maximum of 70 minutes dedicated to performing home tasks, and fourth-graders' total limit extends to 90 minutes.

A teacher is a person on whom reform is based. Without a teacher, any changes will be impossible, because one of the core principles of the New Ukrainian School is a motivated teacher. Thus, the purpose of the Ministry of Education and Science of Ukraine is to promote the professional and personal development of teachers, as well as gradual improvements in his/her social status.

In order to use new teaching methods and educational technologies the teacher must have freedom of action, namely the right to choose corresponding teaching materials, improvise and experiment. This perk is provided by the new law of Ukraine “On Education” (*The Verkhovna Rada of Ukraine, 2017*).

The Ministry of Education and Science of Ukraine offers standard curricula, but any teacher or group of authors will be able to supplement or create their own, as well as apply necessary changes to the material given. Today, the teacher is limited only by the state standard. This legal paperwork indicates the final results of the educational process, such as: what students should know and be able to do after completing a certain stage of education. Nevertheless, the teacher determines the ways and means of achieving the expected outcome. As a tool of providing educational services of a higher quality, the teacher is also given the freedom to learn and improve his/her qualification, which is supported by the reform. The teacher has a possibility to spend half of the obligatory hours of advanced training not in the Institutes of Postgraduate Pedagogical Education, but where he/she chooses on his/her own.

Within the second stage, an assessment of corresponding resources of schools and vocational education institutions is carried out in order to create a network of specialized educational institutions on the basis of essential tools, equipment and expendables availability. In 2022 it is planned to create a system of internal quality assurance of education in schools; creation of a system of independent evaluation of learning outcomes for the course of basic secondary education.

Stage three (2023–2029 y.).

Within the third stage of NUS concept implementation, it is planned to develop, approve (2023) and introduce (2027–2029) a new State standard of specialized education, as well as to form a network of specialized schools (2025) and create a system of independent evaluation of graduates of specialized schools.

4. Conclusions

The following educational tendencies can be singled out within the given framework:

- compulsory nature of preschool and secondary education;
- extension of the period of study in secondary school, which will lead to an increase in educational cycles;
- increase in the age limit, reaching which graduates will be able to consciously choose further specialization;
- introduction of the integrated approach to teaching training courses;
- unification of curricula for secondary and vocational education.

The positive aspects of the reform of the education system of Ukraine, according to the researchers, include:

- autonomy of schools;
- professional development and certification of teachers;
- program reform related to changing the forms and methods of teacher-student interaction;

- cooperation of central and local education authorities with teachers and parents of students;
- improving the quality of education, which is understood as an “integrated educational process”.

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SCENIC AND DRAMATIC MANIFESTATIONS OF THEATRICALITY IN POSTMODERN LITERARY DISCOURSE

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Summary

The paper aims at examining the specificity of scenic and dramatic manifestations of theatricality in postmodernist literature. Intermediality studies and linguopoetics function as the theoretical and methodological basis of eliciting textual representations of theatricality. Following this approach, theatricality is viewed as an intracompositional form of intermediality manifested at micro- and macrotextual levels, lexical-semantic, imagistic, compositional, and narrative among them. The notions of 'scenic' and 'dramatic' are construed as crucial parameters of theatricality based on the conventions of theatrical art. Special attention is given to explicating instances of 'scenic' and 'dramatic' characteristics of theatricality in such postmodernist novels as M. Atwood's *Hag-Seed* and I. Murdoch's *The Sea, The Sea*.

Keywords: intermediality, linguopoetics, intermedial reference, postmodernism, scenography, dramaticism.

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1. Introduction

Much of today's interdisciplinary research tackles the problem of crossing the borders between various arts and media (*Elleström, 2010; 2020; Rajewsky, 2005; Rippl, 2015; Schröter, 2011; Wolf, 1999; 2011*). The ever-expanding influence of an interdisciplinary paradigm is especially prominent within the realm of literary studies (*Pennacchia Punzi, 2007*) and linguopoetics (*Vorobyova, 2017; 2020*), which essentially focus on verbal and textual manifestations of distinct arts and media in literary text. Over the last decades, a theoretical and methodological framework for explicating the interplay of arts and media, specifically in the domain of literary discourse, is provided by intermediality studies, a wide-ranging field of research which accounts for various forms of inter-art relations. One example of such an interface between literature and theatre is the effect of theatricality, which receives an increased attention of literary scholars and linguists. The domain of theatre is generally admitted to exert influence on behavioural, social, and cultural practices of humans, with theatricality functioning as one of its integral characteristics. At this backdrop, the crucial parameters of theatricality are those connected with the conventions of dramatic and scenic representations. Although the conceptions of theatricality are manifold within the field of humanities, its literary manifestations lack comprehensive study, particularly what concerns its verbal and textual means in postmodernist fiction.

Following the intermediality-based approach, this paper **aims** to delineate the notion of theatricality as an intermediality form, with a special focus on the scenic and dramatic properties of theatre as its textual facets in postmodernist literary text. Thus, to achieve this aim, the present paper sets out to elaborate on the following points: 1) to provide a systemic overview of

intermediality forms in literary text; 2) to characterize the notions of “scenic” and “dramatic” based on the intermediality perspective; 3) to elucidate the methodological basis for explicating literary forms of theatricality; 4) to elicit the way “scenic” and “dramatic” parameters of theatricality are verbally and textually represented in postmodernist literary text, being part of the theoretical and methodological framework of linguopoetics.

2. Theatricality through the perspective of intermediality forms

The conception of intermedial phenomena stems from the specificity of media interrelations, that is „relations between media conventionally perceived as different” (*Johansson, Petersson, Holdar & Callahan, 2018: 1*). In terms of such relations, Jens Schröter suggests four models of intermediality that could serve as frameworks or “discursive fields” (2011) for discussing various intersections between arts and media, among them *synthetic intermediality*, *formal* or *transmedial intermediality*, *transformational intermediality*, and *ontological intermediality*. In particular, synthetic intermediality accounts for the process of blending different media, which eventually results in creating a new sort of medium attributable to Wagner’s “artistic synthesis of *Gesamtkunstwerk*”, i.e. ‘total work of art’ (*ibid.*). In turn, formal intermediality suggests looking at those “*transmedial*” structures which are not restricted to specific media but pertain to various forms of artworks and artifacts. Within the framework of the formal (transmedial) paradigm, these intermedial features can be “transferred” from one medium to another (*ibid.*), as, for instance, in the case of *theatricalization* of literary texts. Further, transformational intermediality presupposes representation of one medium by means of another, that is a medium does not incorporate another medium directly but represents or comments upon it, such as a painting in a film or a photograph of a building. Finally, ontological view of intermediality implies that media could be defined in relation to other media. Seen in this view, intermediality becomes a prerequisite for media discussions and analysis: “whatever seems to be specific in a given medium depends on [...] the (implicit) definitions of other media that have to be used as contrasts” (*Schröter, 2011*). It should be noted, however, that the four models of intermediality suggested by Jens Schröter do not account for various types of intermedial relations but rather offer a range of discursive frameworks through which the intermedial phenomena are crystalized. The underlying idea here is that media could hardly be seen as clearly separated or restricted to some media-specific boundaries.

In similar vein, Lars Elleström suggests looking at human communication in terms of producing media products and points out its intermedial capacity based on the assumption that “the intermediate entity connecting two minds with each other is always in some way material, understood broadly as consisting of physical entities or phenomena, although it clearly cannot be conceptualised only in terms of materiality” (2020: 13). Such a medium-centred model of communication further contributes to the idea that all media are fundamentally interrelated – they are both “different and similar, and intermediality must be understood as a bridge between media differences that is founded on media similarities” (*ibid.*: 5).

Seen in this way, all arts and media are prone to crossing their “medial” borders and attaining an intermedial status, particularly the way literary texts prolifically display affinities with music, painting, video games, cinematography, or theatre. Hence, the multitude of intermedial relations is widely explored by scholars within the domain of literary studies and linguistics (*Ryan, 2014; Rippl, 2015; Vorobyova, 2017; 2020*). Elaborating on the interface of literature and theatre, the core concepts of intermediality theory could be fruitfully employed as the basis for analysing verbal and textual means of theatricality. Given Werner Wolf’s differentiation of

intermedial relations (1999; 2011), we proceed from an understanding of theatricality as a form of *intermedial reference* – a type of *intracompositional intermediality* that entails an explicit or implicit mentioning of another medium or work (artefact) produced in another medium (Rarenko, 2021). In line with Wolf's approach (1999; 2011), manifestations of theatricality in literary text could be inferred within the following forms: 1) *explicit (overt) references* or reflections upon theatrical works and the art of theatre; 2) *implicit (covert) imitation* of the theatrical medium by verbal and textual means. The act of imitating theatrical art or directly discussing it in works of fiction, on the one hand, incisively amplifies the contiguity of these media. On the other hand, it foregrounds the “theatricalized” effect grounded in the presence of theatre as a distinctive medium in literary text.

3. Scenic and dramatic parameters of theatricality in literary text.

It is important to take into consideration different approaches towards comprehending theatricality in humanities, as well as systematising its intermedial traits in terms of scenic and dramatic parameters. In *A Short Organum for the Theatre*, Bertolt Brecht defines the essence of theatre as “making live representations of reported or invented happenings between human beings and doing so with a view to entertainment. At any rate that is what we shall speak of theatre, whether old or new” (1974: 180). Probing the issue of the relations between art and reality, Brecht claims that “if art reflects life it does so with special mirrors. Art does not become unrealistic by changing the proportions but by changing them in such a way that if the audience took its representations as a practical guide to insights and impulses it would go astray in real life. It is of course essential that stylization should not remove the natural element but should heighten it” (ibid.: 204). It is thus possible to infer that the general nature of theatrical art inevitably revolves around the problem of representing reality, although its artistic expressions might vary across different theatrical schools and methods. These features of theatrical representation are pivotal for comprehending the complex phenomenon of theatricality in the context of postmodernist literature, with the dichotomy of “real” and “theatrical” as one of its prevailing principles.

Considering the “scenic” aspect of literary text envisages the way this notion is defined within the realm of theatre studies, that is what contributes to creating the effect of scenic presence. Traditionally, the term “*scenery*” is used to designate a stage arrangement – “the frame of action on stage, using pictorial, plastic, architectural and other means” (Pavi, 2016: 322). Its functions are considered to be threefold: 1) *illustration* and *representation* of the elements pertaining to the dramatic text with the aim of giving “the illusion of mimetically representing the framework of the dramatic world” (ibid.); 2) *construction* and *modification*, which shifts the focus from the mimetic representation to rendering the stage as “performance machinery”, a space specially constructed for action and movements (ibid.: 323); 3) *subjectivization* – a form of stage arrangement imbued with “dream-like or fantastic atmosphere on stage and in the relationship with the audience” chiefly by means of colour, lighting etc. (ibid.).

The above inventory of functions shows that the scenery in a theatrical performance entails the use of stage elements and materials, ranging from realistic representations to subjectivized forms. Speaking of representation, Roland Barthes views theatre as “precisely that practice which calculates the place of things *as they are observed*: if I set the spectacle here, the spectator will see this; if I put it elsewhere, he will not, and I can avail myself of this masking effect and play on the illusion it provides” (1977: 69). In this respect, Barthes identifies a correlation between the stage and geometry, the former being “the line which stands across the path of the optic pencil, tracing at once the point at which it is brought to a stop and, as it

were, the threshold of its ramification. Thus is founded – against music (against the text) – *representation*” (ibid.). At the semiotic level, the problem of theatrical representation stems from creating *the effect of reality*; in other words, a theatrical production “*stages a referent*”, thus the scenery “is not considered real (despite its material qualities), but is considered, rather, as a sign that refers to reality” (Fernando de Toro, 1995: 87–88). Extrapolating these properties of stage space onto the domain of literature, it is important to consider the way the theatrical scenery is actualized at the level of literary texture both verbally and textually.

Alongside the properties relating to the theatrical scenery, the manifestations of theatricality in literary text require careful explication in terms of the “dramatic” features as well. Initially, the term “dramatic” refers to “a principle of construction of text and performance which accounts for the tension in the scenes and episodes of the fabula toward a denouement (catastrophe or comic resolution) and suggests that the spectator is captivated by the action” (Pavi, 2016: 112). By contrast to the materialized scenic space, the dramatic effect is conspicuous by its emotive tension and histrionics. It is perceived by the audience as “a framework for the development of the action and the characters” (ibid.: 117). Similar to the art of oratory, theatrical acting is concerned with the problem of emotional impact on the audience – “arousing emotions in spectators and listeners by means of the body and voice” (Balme, 2008: 18). Beyond the theories of classical antiquity, the problem of managing “genuine and ‘affected’, i.e. played, emotions” remains a definitive asset of the staged performance (ibid.: 19). With regard to the phenomenon of theatricality, our attention is focused precisely on the way the dramatized nature of theatrical performance could be traced in literary texture, particularly in the prose texts of postmodernist fiction; it includes the analysis and interpretation of the way the idea of “*dramatic acting*” and “*putting on a performance*” is discussed or imitated at different textual levels.

4. Methodological basis for explicating literary forms of theatricality

An inquiry into the interrelation of different art forms requires a “media-conscious” (Ryan, 2014) approach to all further elaborations in this paper. In our attempt to elucidate the manifestations of theatricality in postmodernist fiction, the *theory of intermediality* serves as a starting point of analysis, which allows us to discern and systematize various intersections between theatre and literature.

Viewed as a form of *intracompositional* intermediality (Wolf, 1999; 2011), theatricality presupposes the use of *intermedial references* to theatre in literary text (Rarenko 2021). The incorporation of the theatrical medium into the literary texture is analyzed within the following forms: 1) explicit discussions or thematic references to theatre as a distinct medium or a work produced in this medium; 2) implicit imitation or stylization of the features pertaining to theatrical practices by the verbal and textual means available at various textual levels (ibid.). Within the broad field of theatrical conventions, we will deduce literary instances of theatricality in terms of the “scenic” and the “dramatic” parameters based on their conception in theatre studies.

Traces of scenic and dramatic artifice in postmodernist writing – including both *explicit (overt)* and *implicit (covert) intermedial references* – are elicited and classified with the help of *linguopoetic* and *linguostylistic* analysis. Given the multilevel (micro- and macro-) structure of literary text, this approach comprises the following stages: 1) explicating the way the “*scenic*” and “*dramatic*” facets of theatricality are marked *lexically*, as well as tracing their recurrence in *isotopic chains* throughout literary text based on Greimas’s understanding of *isotopy* as a set

of recurrent linguistic categories (*cit. after Herman, Jahn & Ryan, 2008: 263*); 2) analysing the *verbal imagery* related to the scenic and dramatic parameters of theatricality in literary text; 3) eliciting *narrative* and *compositional* devices that actualize the effect of theatricality, particularly in the scenic and dramatic sense.

5. Theatricality in postmodernist literature in the context of „scenic” and „dramatic” parameters: Stages of analysis

There is a tendency within postmodernist criticism to argue that postmodernism experiments with the ideas of artifice, theatricalism and simulation of reality (*Baudrillard, 1982; Bertens & Fokkema, 1997; McHale, 1992*). To reveal the specificity of theatricality in postmodernist fiction, the research is carried out with a special attention to such novels as *Hag-Seed* by M. Atwood and *The Sea, The Sea* by I. Murdoch.

Encompassing the scenic and dramatic features of the theatrical medium, theatricality in its complex form is studied within various textual dimensions. Based on the selection from lexicographic sources (*Urdang, 1994*), the key verbal markers of “theatricality” include the following lexical means in its synonymic group: ‘*theatric*’, ‘*dramatic*’, ‘*stage*’, ‘*histrionic*’, ‘*Thespian*’, ‘*repertory*’, ‘*stagy*’, ‘*overdone*’, ‘*camp*’, ‘*campy*’, ‘*melodramatic*’, ‘*overwrought*’, ‘*exaggerated*’, ‘*forced*’, ‘*overacted*’, ‘*overacting*’, ‘*sensational*’, ‘*sensationalistic*’, ‘*fake*’, ‘*false*’, ‘*mannered*’, ‘*affected*’, ‘*unnatural*’, ‘*artificial*’, ‘*showy*’, ‘*ostentatious*’, ‘*spectacular*’, ‘*extravagant*’, ‘*phoney*’, ‘*ham*’, ‘*hammy*’, ‘*grandstand*’. The “scenic” parameter of theatricality is marked by such epithets as ‘*picturesque*’, ‘*panoramic*’, ‘*pretty*’, ‘*beautiful*’, ‘*grand*’, ‘*awesome*’, ‘*awe-inspiring*’, ‘*impressive*’, ‘*striking*’, ‘*spectacular*’, ‘*breathtaking*’ (*ibid.*). On the other hand, the synonymic group of “dramatic” is represented by means of the following constituents: ‘*theatric(al)*’, ‘*dramaturgic(al)*’, ‘*Thespian*’, ‘*histrionic*’, ‘*stage*’, ‘*vivid*’, ‘*sensational*’, ‘*startling*’, ‘*breathtaking*’, ‘*sudden*’, ‘*striking*’, ‘*noticeable*’, ‘*extraordinary*’, ‘*impressive*’, ‘*marked*’, ‘*shocking*’, ‘*expressive*’, ‘*graphic*’, ‘*effective*’, ‘*complete*’, ‘*considerable*’, ‘*radical*’, ‘*major*’, ‘*flamboyant*’, ‘*melodramatic*’, ‘*colourful*’, ‘*showy*’, ‘*stirring*’, ‘*spectacular*’, ‘*theatrical*’, ‘*histrionic*’, ‘*exaggerated*’, ‘*overdone*’ (*ibid.*).

Considering the way the above lexical items constitute *isotopic chains*, i.e. strings of theatre-related key words throughout postmodernist literary texts, let us first address M. Atwood’s novel *Hag-Seed*. Its plot revolves around the idea of interactive theatre unfolding at the premise of the Fletcher County Correctional Institute, wherein the former theatre director Felix Phillips is in charge of staging Shakespeare’s play *The Tempest*. The description of the theatrical scenery imbues a typical prison setting with the characteristics pertinent to theatre, e.g.: “Welcome to the good ship ‘**Tempest**’, which you are now aboard. I’m the Boatswain and these are my sailors. We’re sailing you across the sea to a desert isle. Don’t be worried if there’s some strange noises, it’s part of **the play**. And this is **an interactive piece of theatre, experimental** in nature; we’re alerting you of that fact in advance.” (*Atwood, 2016: 206*). In this textual fragment, the iteration of theatrical lexis (‘*Tempest*’, ‘*the play*’, ‘*an interactive piece of theatre*’, ‘*experimental*’) thematizes the contemporary stage performance of Shakespeare’s play. The presence of stage effects is further foregrounded by references to lighting, sound, and artificial decoration ‘*decorated*’, ‘*amateurish*’, ‘*cardboard*’, ‘*plastic*’, ‘*painting*’, ‘*light*’, ‘*silhouettes*’, ‘*wrapping paper*’, thus attributing the space of a prison cell with the stagey and artificial qualities: “The walls are **decorated** with **amateurish cardboard** palm trees, seashells, a squid. There’s a box of **plastic** Lego blocks in the corner. An awful **painting** of the seashore, with some kind of horrible mermaid on it.” (*ibid.: 214*); “Then the overhead **light** goes on: they’re in a four-bunk jail

cell, two up, two down. The walls are **decorated** with **silhouettes of cactuses**, cut from brown **wrapping paper**.” (ibid.).

In turn, the dramatized nature of literary text appeals to the emotional rather than spatial conventions of the staged performance. In I. Murdoch's *The Sea, The Sea* the idea of acting out the dramatic performance is widely discussed by the narrator Charles Arrowby, a retired theatrical director, who reminisces about the essence of theatre, e.g.: “Wilfred was a **great actor**. They do not make them like Wilfred any more. [...] He could stand **motionless, not moving an eyelid**, and make a theatre rock with prolonged laughter. Then he would **blink** and set them off again. Such **power** can be almost **uncanny**: the mystery of the **human body**, the **human face**. Wilfred had a face which **glowed with spirit**.” (Murdoch, 1980: 35). Here, the power of dramatic performance is marked by the lexical units denoting the actor's body, face, and onstage motion ('great', 'actor', 'motionless', 'not moving an eyelid', 'blink', 'power', 'uncanny', 'human body', 'human face'). The dramatic effect of acting and theatrical role-play is thus conveyed as having mastery of emotions and the power to have an effect on the audience.

At the *imagistic level*, the aforementioned theatre-bound lexical items are further engaged in the use of verbal imagery, wherein the scenic and dramatic characteristics are given special prominence. In the vein of Shakespeare's catch-phrase “All the world's a stage / And all the men and women merely players” (2006: 227), postmodernist literary texts often ironically reinterpret contemporary realia through the metaphor of theatre, e.g.: “**Emotions** really exist at the bottom of the **personality** or at the top. In the middle they are **acted**. This is why **all the world is a stage**, and why the **theatre** is always popular and indeed why it exists: **why it is like life**, and it is like life even though it is also the most vulgar and outrageously **factitious** of all the arts. [...] Whereas the theatre, even at its most '**realistic**', is connected with the level at which, and the methods by which, **we tell our everyday lies**. This is the sense in which '**ordinary**' theatre resembles life, and **dramatists are disgraceful liars unless** they are very good.” (Murdoch, 1980: 33). Apart from containing the metatextual reflections about theatre, this passage also metaphorically compares ordinary life to a stage, drawing a parallel between dramaturgical art and everyday pretence ('all the world is a stage', 'we tell our everyday lies', 'ordinary theatre resembles life', 'dramatists are disgraceful liars'). The idea of theatrical disguise is also foregrounded by semantically and contextually contrasting lexical units, e.g. 'outrageously factitious', 'realistic', 'ordinary theatre', 'everyday lies'.

At the *macrotextual level*, theatricality is chiefly centered around thematization and imitation of the theatrical medium, with the scenic and dramatic effects encompassing the *narrative* and *compositional* structure of literary text. Such an example of theatricality could be inferred from *The Sea, The Sea*, where the narration is delivered from the perspective of an affectedly “dramatized” character. Charles Arrowby, the novel's narrator and protagonist, cannot remain oblivious of his theatrical past, as he retires in a house by the seaside. Being a former theatre director and playwright, he repeatedly discusses the essence of theatrical art in his memoirs. These passages are interlinked with the description of his present-day life which gradually turns into a theatrical artifice of its own. In the light of this fact, the Charles Arrowby's narrative turns out to be overly dramatic, delusional and unreliable, echoing the presentational mode of drama, e. g.: “It was only now **clear** to me how very much I had **made** that **image**, and yet I could not feel that it was anything like a **fiction**. It was more like a **special sort of truth**, almost a touchstone; as if a thought of mine could become a **thing**, and at the same time be **truth** [...] and the **ambiguous** tormenting **image** had become gentle and a source of light.” (Murdoch, 1980: 428).

A stagey – almost pictorial or photographic – image is further portrayed through the narrator's eyes, e.g.: “I **conjured up** that weird **scene** in the sitting room at Niblett's with the

scones and the cucumber sandwiches and the iced cake and Ben and Hartley looking so clean and well [...] There had been a kind of **creepy peacefulness**. It was indeed like a **primitive picture**, the virtuous and happy couple in their pretty little house complete with collie dog. They were **‘plumped out’** in my memory, as **art plumps out its subjects**, making them fatter and **smoother than life** and **more absolutely there**. They looked better, healthier, handsomer than I had seen them before.” (ibid.: 428–429) In the vein of a stage director, Charles Arrowby arranges a theatre-like scene, where the motionless image of characters is reinforced through the textual references to art (‘scene’, ‘primitive picture’, ‘smoother than life’ etc.). Narratorial instances like this yield information about the way the inherently multimodal form of theatre can be verbally and textually represented in literature.

6. Conclusions

Postmodern literary texts demonstrate a variety of verbal and textual means through which the effect of theatricality is manifested at the micro- and macrotextual levels, lexical-semantic, imagistic, compositional, and narrative, respectively. It can thus be suggested that a comprehensive understanding of theatricality involves elaborating on the notions of “scenic” and “dramatic” as the medium-specific features of theatre. It implies the possibility to define theatricality as a form of intermediality within the realm of literature grounded in: 1) overt (explicit) references to the scenic and dramatic facets of theatre, or 2) their covert (implicit) imitation by means of literary text. This view of theatricality enriches the intermedial constituent of linguopoetological analysis and the way it can be applied to get a deeper insight of interart relations in the context of postmodernism and beyond.

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EMOTIVENESS OF POETIC TEXT: A CASE OF CONCEPTUAL MODELLING

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Summary

The paper aims at finding out the conceptual ground of emotiveness of the poetic text. In the current study, emotiveness is regarded as a textual category which reveals itself in the unity of the form (figurative means), content (emotional images of the addresser), and specific functions (intentions of communicating emotional experience of the addresser) of a poem. It has been stated that emotiveness of a poetic text is made of emotives – verbal units that mark emotional images of the author. Since emotional imagery of a poetic text bears diffuse (but by no means haphazard) features, its study becomes possible through the conceptual modelling methods. The application of them to the study of emotives resulted in revealing the presence of emotive trajectory – the emergent formation in the poetic text that organizes its emotional images. In this paper, the emotive trajectory is defined as a conceptual construct which has a specific configuration embracing the alternation of fluctuates and emotive turns. Each fluctuate consists of the starting point, uprising fragment, peak, down-falling fragment and affective zero point. The fluctuates are shaped by force dynamics of the emotional situations which are present in the poetic text.

Keywords: emotive unit, force dynamics, emotional image, emotional situation.

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1. Introduction

Emotiveness of a poetic text is one of its categories that is regarded as a unity of form (a network stylistic means) and content (emotional imagery that renders emotions of a poet which are notable for their diffuse character). The issues of emotiveness of poetic texts are centered around the point of communicating the emotional experience or intentions of the addresser through the linguistic means of a text.

The number of researches dedicated to textual emotiveness (in non-poetic and poetic genres) have already revealed some of the fundamental sides of this phenomenon: 1) the difference between the notions of *emotionality* and *emotiveness* (the latter is regarded as a specifically linguistic phenomenon whose essence lies in verbal expression of emotional experience of a person) (Shakhovskiy, 2016); 2) the correlation between the *emotive – expressive – aesthetic* categories of fictional texts (Bolotnova, 2013; Lenko, 2014; Nashkhoieva, 2011); 3) the typology of emotive units (that includes nominative / descriptive / expressive ones) (Shakhovskiy, 2016); 4) the principles of grouping emotive units into complex emotive networks (Redka, 2020); and also 5) the methodology of working with diffuse images – such as emotions – in fictional texts (Gladio, 2020; Vorobyova, 2006). These and many other findings in emotiology – the branch of linguistics which deals with representations of human emotions in languages – form a solid basis for oncoming researches of emotiveness of poetic texts.

The fact that emotions have a diffuse character does not mean that they stay in a chaotic form in the text. Since poetic texts profile a large number of interrelated images,

they are also marked by high emotive density (the term suggested by V. Shakhovsky (*Shakhovsky, 2016*)). In the current study, we will try to find out how emotional images are organized in a poem.

The **aim** of the paper is to reconstruct the configuration of emotive trajectory – the complex conceptual image that models the flow of the addressers' emotions in the poetic text. This aim can be achieved provided some **tasks** are accomplished: *firstly*, we will try to trace the stylistic means that have an emotiogenic capacity; *secondly*, we will make an effort to establish the ways of organizing the above-mentioned stylistic means in the fragments of the poetic text; *thirdly*, we will try to identify the dominant emotives in the poem and analyze them from the point of view of valency and intensity of the emotional images that they mark. Thus, we hypothesize that tracking the links between the emotives will result in finding out a specific configuration of the emotive trajectory in the poetic text.

The **methods** of analysis employed in the paper include 1) the stylistic analysis (aims at revealing the cases of convergence and functioning of figurative means and devices); 2) the method of conceptual modelling which helps to establish the main conceptual nodes that correlate with dominant emotional images and thus enables the reconstruction of the model of emotive trajectory; 3) the methods of text interpretation which rely on the findings of psychology (*Izard, 1991*) and help to explain the obtained results.

The analysis is carried out on the basis of the poem "Winter" by the Scottish poet Edwin Morgan (1920–2010) (*Morgan, 1990*).

Winter

*The year goes, the woods decay, and after,
many a summer dies. The swan
on Bingham's pond, a ghost, comes and goes.
It goes, and ice appears, it holds,
bears gulls that stand around surprised,
blinking in the heavy light, bears boys
when skates take over swan-tracks gone.
After many summer dyes, the swan-white ice
glints only crystal beyond white. Even
dearest blue's not there, though poets would find it.
I find one stark scene
cut by evening cries, by warring air.
The muffled hiss of blades escapes into breath,
hangs with it a moment, fades off.
Fades off, goes, the scene, the voices fade,
the line of trees, the woods that fall, decay
and break, the dark comes down, the shouts
run off into it and disappear.
At last the lamps go too, when fog
drives monstrous down the dual carriageway
out to the west, and even in my room
and on this paper I do not know
about that grey dead pane
of ice that sees nothing and that nothing sees.*

The poem masterly represents the winter atmosphere in Nottinghamshire due to the eventivity and laconic descriptions of settings which altogether create a number of emotional situations.

2. Emotional situations within image-bearing space of poetic text

All images in a poetic text are subdued to some kind of center (*Gadamer, 2001: 89*). However, the existential context of a poem may be based on several inner centers (*Neborsina, 2005: 27*). These inner centers correlate with so-called “emotional situations”.

In other words, the image-bearing space of the poem is centered around internally organized subspaces that contain emotional situations. The emotional situation is regarded as a set of circumstances a persona finds himself/herself in and thus experiences some sort of feelings (*Cambridge dictionary; Freeman, 2013: 93; Rojas de la Puente, 2018*).

Emotional situations embrace such components as 1) a brief scenario of some event or its part; 2) the setting (in the sense of space and/or time structuring); 2) the image of agonist and 3) antagonist (in L. Talmy’s terminology (*Talmy, 1988*)) the interaction of which predetermines the outcome of the situation described. Since emotions are situationally bound (*Shakhovsky, 2016*), the analysis of the emotional situations in the poem is important for revealing the specificity of force dynamics that shapes the dominant emotional images of the text.

Emotional situations can be universal, culturally bound, and personal. According to their modalities they fall into real or imaginary; desirable or undesirable for the persona in the poetic text. In case if several of them interact within a poem, they acquire contrasting or complementing qualities.

The suggested for the analysis text contains two global emotional situations that of summer and winter. The emotional situation of summer is represented only with few poetic details that represent the debris of emotional impressions of the persona: the image of summer (it supposedly implies positive feelings which stay vague and undifferentiated in nuances) and the images closely connected with it, for example, a graceful swan that leaves the tracks on the surface of water. The positive impressions appear in the text in the images of ephemeral bright spots: “*summer dyes*”, “*the dearest blue*”. The epithets on the verbal level of the poem appear to be the manifestation of the conceptual metaphor positive emotions are bright spots which structures the subspace of summer. These emotional images are pushed to the background by the powerful images from the subspace of winter. The emotional situations of this subspace are more differentiated. Structurally they spiral down from the neutral ones (at the beginning of the poem the phrase *the year goes* has undifferentiated axiology and emotive colouring since it can be either positive or negative in the context of the poem) to fearsome dizziness evoked by the awesome all-engulfing dark energy of winter.

Within the subspace of winter the emotional situation is shaped by the antagonist of nothingness that takes everything away including the bright spots of summer. This is a cumulative image in the text. It is becoming more and more powerful.

The poem fixes the transitions of persona throughout the stages of one and the same emotional state. The figurative expressions give the possibility to trace the process of how one group of images is superseded with the other ones until the nothingness fully intakes the vital energy and conserves it. On the lexical level, these transitions are marked with the combinations of enjambments, catch repetitions, and climax: “*The muffled hiss of blades escapes into breath, / hangs with it a moment, fades off. / Fades off, goes, the scene, the voices fade, / the*

line of trees, the woods that fall, decay / and break, the dark comes down, the shouts / run off into it and disappear.”

Thus, on the conceptual level of the text the metaphor negative emotion is all-encompassing darkness makes itself visible. The image of nothingness which parallels darkness takes away a lot of common images. On the lexical level, the idea is marked by the repetition of the verb *to go* in different grammatical forms and its contextual synonyms *to fade* and *to disappear*. So, darkness which is associated with nothingness generates a complex of undifferentiated diffuse feeling (*I do not know / about that grey dead pane / of ice that sees nothing and that nothing sees*) which have the potential to express themselves when the vital light comes on.

Interestingly, the fragments of the positive emotional images pertaining to the subspace of summer transform into the artistic memory of persona under the influence of the image of nothingness: *the swan-white ice, dearest blue's not there, though poets would find it*. These examples testify to the fact that figurative language is always fueled by the author's emotions.

So, the emotional situation in a poem forms its dominant emotive image (*Maslova, 2013: 38*) which has its own dynamism of unfolding and its own axiology. The switching of the author's attention from one emotional situation to the other (which has the dominant emotional image of its own) forms the emotive trajectory in poetic texts.

3. Emotive trajectory of poetic text

The way the author focuses his attention on the subspaces predetermines the formation of the emotive trajectory in a poetic text. The emotive trajectory appears as a result of linking the dominant emotive images (that are identified on the previous stage of conceptual analysis) as they appear in the text. In fact, the emotive trajectory seems to be the model of the flow of the author's emotion of which results in getting either to positive or negative emotional state. In other cases, the poem ends with the ambivalent emotional image.

The emotive trajectory is a dynamic emergent formation which changes under the influence of force dynamics of subspaces in the poetic text. It reflects the valency and intensity of the emotional images experienced by persona and gets manifested in the tonal system of the poem.

The features of the emotive trajectory are predetermined by the ontology of the emotional experience of a person. Structurally it consists of emotive fluctuates and turns. The emotive fluctuate is a fragment of emotive trajectory which reflects a progress of one emotional image that moves towards its peak. The emotive fluctuate is marked by specific valency and intensity. The fluctuates of different valencies alternate with emotive turns in creating the emotional tension in poetic texts.

The analyzed poem is based on the number of fluctuates of the same valency and uprising intensity that enhance each other building up the image of uprising disturbance of persona: 1) *The muffled hiss of blades escapes into breath, / hangs with it a moment, fades off;* 2) *Fades off, goes, the scene, the voices fade, / the line of trees, the woods that fall, decay;* 3) *and break, the dark comes down, the shouts / run off into it and disappear.*

Let us now consider the structure of the emotive fluctuate. It consists of 1) the starting point; 2) uprising fragment; 3) peak or focus; 4) down-falling fragment and 5) affective zero which naturally coincides with the starting point of the subsequent emotional image.

The starting point of the emotive fluctuate is marked with a fragment in the text which signals about the appearance of a new emotional image. This point usually coincides with a logical «threshold» in a text which is defined by V. Karasev as the place of “condensed sense” (*Karasev, 2009*). Emotive thresholds can be high, middle, and low. In the analyzed poetic text,

the number of fluctuates start with a point when the previous fluctuate gets to the lowest point thus making the atmosphere more and more electrified with emotions of intrigue.

The uprising fragment of emotive fluctuate is marked with the cases of gradation on the verbal level of the text. They create the effects of emotive crescendo. In the analyzed poem it is represented by the cases of climax that have been mentioned above.

The increase of emotive intensity takes the emotive fluctuate to its peak, which correlates with the notion of emotive dominant in a poetic text or its fragment. Some poetic texts can have several emotive peaks of different axiological characteristics. The emotive peak can be created with the help of convergence of linguistic means in some fragments of a text. In the analyzed poem, it is represented with the verbs *to go – to fade – to disappear*. The last one being of the strongest in connotation.

The down-falling fragment of the emotive fluctuate renders the images associated with the emotional relief of the persona, and it is usually visible by the cases of anticlimax in the text.

The affective zero-point associates with the emotive balance and harmony in a poetic text. There is next to no distance between the affective zero and the emotive turn within the fragment of emotive trajectory.

The following fragment of the poem can illustrate the point of the emotive fluctuate development: *At last the lamps go too, when fog / drives monstrous down the dual carriage-way / out to the west, and even in my room / and on this paper I do not know / about that grey dead pane / of ice that sees nothing and that nothing sees*. In these lines, the emotional image of fearsome disturbance starts with somewhat positive image of peacefulness which comes with “*lights going on*”, but as the image progresses, it becomes clear that this positiveness is intended to set the contrast with the “*monstrous*” fog (the uprising fragment of the fluctuate) that transforms into the dreary evening “*grey dead pane*” (the uprising fragment of the fluctuate) and finally into the total darkness or “*nothingness*” (the peak of the fluctuate).

Emotive turn is defined as the change of in the emotive strategy of the author. The emotive turn occurs the image of emotion of the opposite axiology in a poetic text is observed. On the verbal level, it can be visible through the use of stylistic means marked by the opposite connotation. The emotive turns may create the cumulative images on the level of the text. They may signal about the author’s emotional reorientation (be it conscious or subconscious). The analyzed poem does not have the emotive turns since the fluctuates possess the same valency and differ only in their intensify creating the image of anxiety, a kind of emotional disbalance which is necessary for poetry writing.

4. Conclusions

Emotiveness of poetic texts is centered around the emotive trajectory – the emergent image which renders the flow of the author’s emotions. The emotive trajectory includes the number of fluctuates of different intensity and valency which are directed at the ultimate emotive image formation in the poetic. It can be represented by delight or agitation. The configuration of the emotive trajectory much depends on the author’s emotionality and creative intentions.

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MODERN CONDITION OF MATURITY OF INTERCULTURAL COMPETENCE OF MASTERS OF MILITARY MANAGEMENT: RESULTS OF QUESTIONING

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Summary

The article contains the analysis of questioning concerning attitude to necessity of development of intercultural competence of future Masters of military management (MMM), importance of intercultural awareness, study of the level of intercultural awareness of military officers of the Armed Forces of Ukraine (by self-assessment). There was defined the level of orientation within the terms (intercultural communication, intercultural competence, ethnocentrism, multicultural state), understanding of the reasons of conflicts between the representatives of different cultures. We have studied which characteristics are preferred by future Masters of military management in a specialist with a developed intercultural competence.

The purpose of the article is to define topicality of necessity to develop intercultural competence of future masters of military management in their professional training, to find out the general level of understanding of main principles and fundamentals of intercultural communication in military sphere for outlining the further direction of the research.

For the aim of further research, we have designed the survey form and conducted the questionnaire at the beginning of findings stage of pedagogical experiment, which contained the range of **tasks** as follows: 1) to define the level of importance of possession of intercultural awareness among future MMM; 2) to study the level of understanding by the future Masters of military management of intercultural values, intercultural features, existing intercultural differences; if tolerance is important in intercultural interaction and what are the ways of its achievement; 3) to define what is the reason of intercultural conflicts, what obstacles arise and prohibit efficiency of intercultural communication; 4) to sort out what assessment criteria are important for a specialist possessing intercultural competence in professional activity; 5) to analyse the results.

Keywords: intercultural competence, intercultural dialog, awareness, intercultural awareness, professional training, questioning results, multiculturalness, technologies of combined studying, case study method.

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1. Introduction

Modern challenges faced by our state and European Union, as well as NATO countries concerning providing a proper management and saving of cultural variety constantly need the search of not only new modern approaches to solutions of intercultural dialogue issues, but correspondingly the development of intercultural competence of each participant of this process, that is discussed in the White Paper on Intercultural Dialogue of Council of Europe (*White Paper, 2010:44*) approved on May 7, 2008 in Strasbourg by the Council of Europe Ministers of Foreign Affairs at their 118th Ministerial Session. The White Paper contains special

requirements to education, updating of its goals, content and forms that corresponds to requirements of Bologna process and National Doctrine of Education Development in Ukraine in XXI century (*National Doctrine, 2001:21*).

Activity of Ukraine on the international stage is determined by globalisation processes that influence communication peculiarities. That is why AF of Ukraine concentrate their attention on possibility to communicate in a language of foreign business partners, and at the same time the lack of knowledge of following kind arises: culturological, national-and-cultural, religious features of strategical partners, that makes an effective dialogue impossible.

2. Methods and research situation

To define the attitude of future Masters of military management to necessity of development of their intercultural competence we have conducted the survey. The survey had been conducted in the second half of 2020 under the auspices of Ivan Cherniakhovskyi National Defence University of Ukraine (city of Kyiv). 124 persons participated in the survey.

Designing the survey we have used several variants of questions composition, both free-answer questions and closed-end questions. The survey is anonymous. Questions of the survey are interrelated and partially cover each other in their content, which enables to verify the accuracy of the answers, they have a clarifying function. The survey was composed of two parts and nineteen questions; the first part contains five questions.

A part of questions required answers “Yes”, “No”, “I don’t know”. Another part of questions has a 10-points scale where the respondents had to select their level of intercultural awareness maturity (1 corresponds to the lowest one, 10 – to the highest one). Another part of questions contained ready variants of answers and needed choosing a needed one; in some of them it was possible to choose two and more answers. Free-answer questions required more deep knowledge and intercultural awareness, opportunity of creative approach in the process of these questions answering was given.

3. Discussion of the results of empirical research

Modern professional training of Ukrainian officer of 21 century within the framework of higher military education includes culturological, linguistic, ethical, social-and-communicative, psychological and applied professional dominant of officer’s character education. As a result we believe that the scientific task of the modern time is *development of students’ (cadets’) intercultural competence, ability and readiness to efficient participation in the process of intercultural dialogue*.

Theoretical analysis of European regulations and treaties dealing with facilitation of intercultural dialogue and provision of efficient intercultural interaction shows that modern number-one-demand is possession of intercultural competence (hereinafter – IC). In the times of the world globalization and peoples’ and cultures’ rapprochement, conducting efficient intercultural dialogue, knowledge of intercultural features, and differences gain priority for future Masters of military management; issues of multicultural education and intercultural awareness are also topical. As a result a question arises: is there paid a due attention to the development of intercultural competence in the Armed Forces of Ukraine? In the state that actively participates in the arrangements of international military cooperation, joint international studies and trainings, conferences and seminars not only within Ukraine but also abroad, too much attention is paid to learning English and unfortunately the development of the very intercultural competence of future Masters of military management lacks attention.

The analysis of the questionnaire enabled us to find answers to a range of important questions, and to solve current tasks we face. The results of the survey emphasise on the importance of possession by Masters of military management of intercultural awareness at the high level for the efficient professional activity, and indicate the topicality of the issue which is already studied not from the theoretical point of view, but from the practical one. Mentioned results will positively influence on the development of the educational course on the basis of intercultural communication, as well as its implementation to the program of professional training of future Masters of military management. We shall note that (91,1)% of respondents underlined the importance of intercultural awareness in their professional activity, and (4,45)% of respondents answered that it is not important for them and they did not decide yet on the necessity of intercultural skills equally. I.e. the major part of future Masters of military management feels the need in getting correspondent knowledge and development of skills in intercultural communication.

As to the definition of the level of intercultural competence maturity (self-assessment), only (3,2)% of future MMM admitted their level to be too low, (65,3)% defined their level as average, and (31,4)% noted the high level; nevertheless I'd like to mention that this is a simple survey without examination of respondents' psychological, cognitive, affective components, though it is planned for the further research. Most of respondents consider their level average and high, but future Masters of military management strive for improvement, which is witnessed by the survey showings. Answers to the question "Do you try to increase your level of intercultural awareness, and if yes, how?" revealed motivation component in future MMM basing on presence of certain motivation, value-orientedness, professional focus and desire for self-realisation, as far as efficiency of training or specialist's actions includes not only the defined skills and abilities, but they are multiplied and improved thanks to correspondent value-and-conceptual orientation (*Tatur, 2004*). Motivation to deepen intercultural knowledge, proficiency and skills development, ability to respond adequately and quickly, prevent and avoid conflicts, direction on professional and effective dialogue with the representatives of other cultures – all these define the person's commitment to the process of acquiring and developing intercultural competence on the high level.

Methods and means of self-improvement mentioned in the answers by future MMM are interesting today for getting knowledge in intercultural communication, that gives some ground for development of educational course involving innovative, interactive technologies.

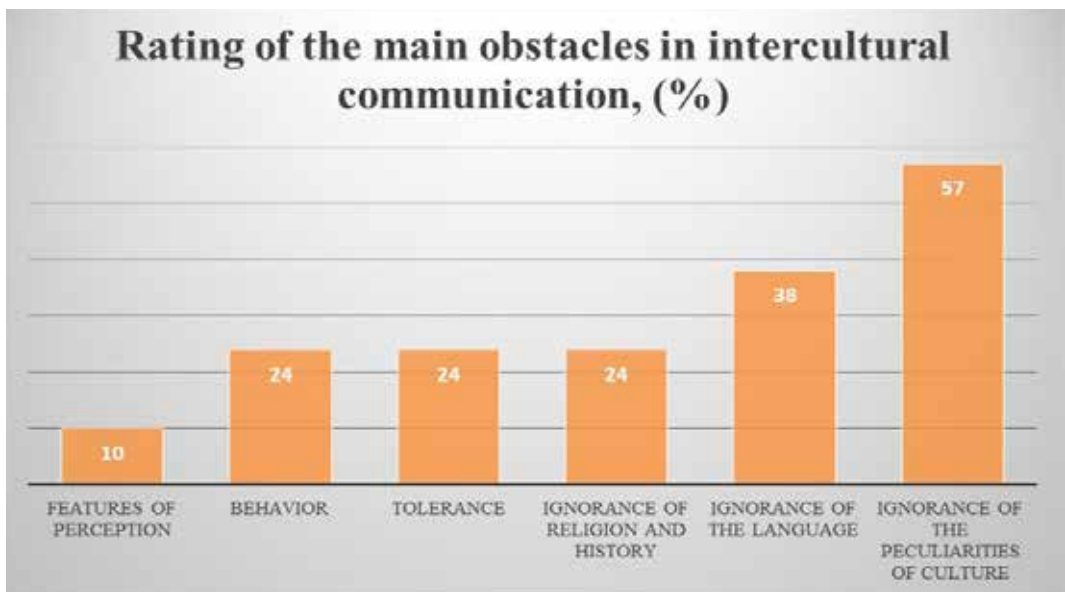
The question "Do you try to increase your level of intercultural awareness, and if yes, how?" Gave an option to select several answers: The most respondents (64,52)% have chosen the method of "analysis of intercultural activity of well-known figures and adopt their experience"; (41,94)% of respondents "read special literature"; only (8,87)% "participate in training courses and seminars", and (48,39)% "reflexively estimate interaction with colleagues". We would mention that the amount of MMM who visit training courses is very small, and analysis of activity and reading of special literature is not enough for getting and deepening cognitive component, practical experience and improvement of skills on intercultural communication, as well as reflecting and analysing ones interaction. The process of intercultural communication engage lots of factors: Communicative (language, context, communication style, non-verbal behaviour); psychological (perception, evaluation, attribution, stereotypization, identification, empathy, reflection); cultural (norms, values, basic features, experience as the basis for psychological processes of communication) (*Novitskaya, 2008*).

We have analysed that (57,26)% of respondents estimate the level of intercultural awareness of military servicemen in the Armed Forces of Ukraine as an average, (38,71)% of respondents admitted it to be too low and only (4,03)% of respondents consider the level to be high.

Nevertheless, at the same time (51,61)% of respondents reckon that the level of attention to the development of intercultural competence in higher military educational institutions is high, and (29,84)% state that this level is low, while (18,55)% gave no answer to this question. We conclude that military servicemen are in need of intercultural competence development and its improvement; though the level of attention to intercultural competence is high, the level of its development turned to be insufficient.

Analysis of answers of the second block of questions contains sub-items that allow to deeper define the level of understanding by future MMM of the concept of intercultural competence; almost all the respondents have a clue of its definition, yet having the access to the Internet. Looking through the results, we saw that the definition of the concept “intercultural competence” was given with the help of Internet-resources, as the answers have monotypic repeated segments. We came to this conclusion analysing the answers about definition of “intercultural communication” concept. Nevertheless, we shall note that (86,29)% of respondents believe that Ukraine is a multicultural state, (10,48)% think it is not multicultural, and only (3,23)% failed to answer this question. Surely, we conclude that the majority of respondents understand the meaning of “multicultural” concept.

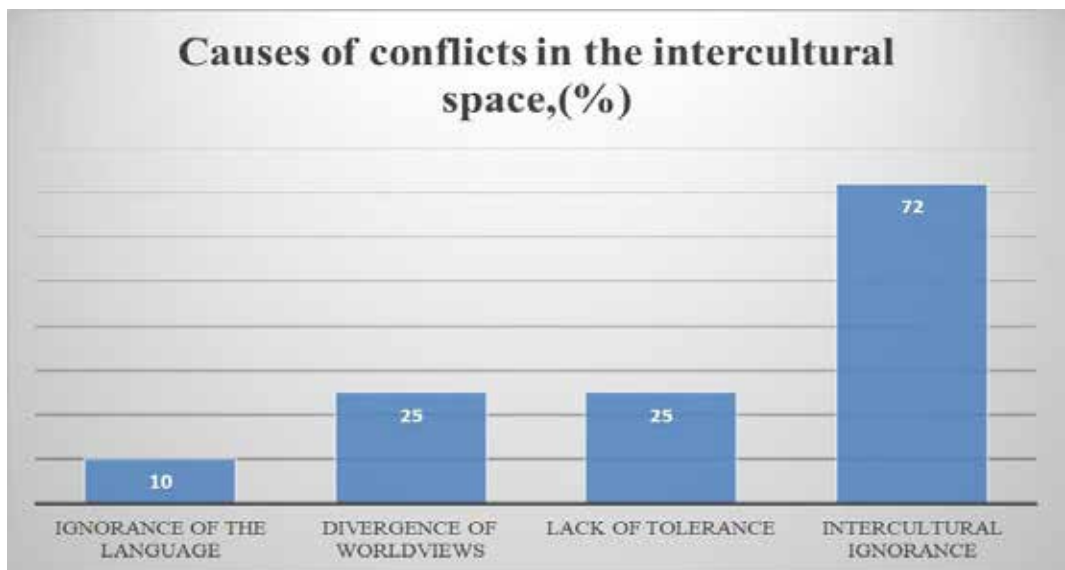
The survey showed what turned to be main obstacles in the process of intercultural communication. According to the analysis, the main obstacle is thought to be “lack of knowledge and unawareness on culture features” (prejudices, customs, traditions, values, perception of space and time) – (57)%, “inability to communicate in a language of a strategical partner as an obstacle” that hinders free and effective communication, takes the second place in our survey – (38)%, “unawareness of religion, history, political structure of the partner state”, as well as “lack of tolerance, not knowing how to behave in a company of the representative of other culture” gained (24)% each. It shall be also noted that apperceptive features – “peculiarities of perception and dependence of perception from previous experience” of a personality is a substantial obstacle too – (10)% of respondents (pic. 1) though.



Pic. 1. Rating of the main obstacles in intercultural communication

Erin Meyer – a modern researcher in the sphere of intercultural communication – believes that “consideration of individual differences is important, but only with regard to cultural origin, that is why we shall admit the weight of cultural differences and respect them, the first and the second are both important” (Meyer, 2014) and finally “lack of information on the basis and peculiar features of intercultural communication” is a sufficient obstacle – (5)%.

Herewith, respondents do not consider inability to communicate in a language of a representative of another culture to be a reason of conflicts, the first place takes namely “unawareness, not understanding the differences and peculiarities of a culture, not knowing the principles of conduct” – (72)%; “no tolerant attitude to a representative of another culture and divergence of mindset, as well as “differences in religion and political preferences” were chosen by (25)% of respondents each, and only (10)% of respondents consider “ignorance of the language” to be the reason of conflicts (pic. 2).



Pic. 2. Causes of conflicts in the intercultural space

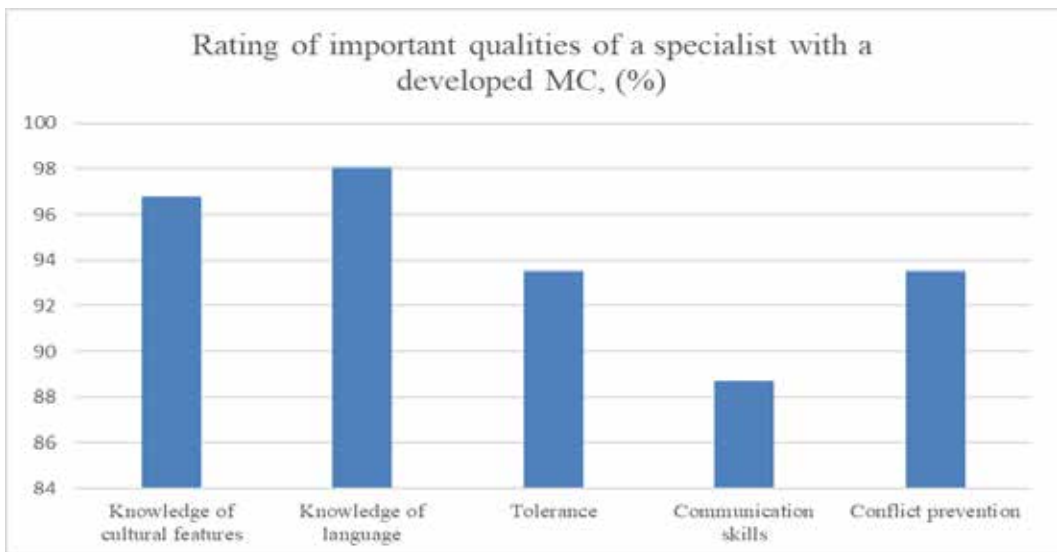
Understanding of the fact that command of language itself is not enough is underlined by the most of scientists within this issue; they define the speech component as “an ability to render specific for certain culture signals of conversation participants’ readiness to start intercultural conversation or, in contrary, unwillingness to communicate... Ability to define the proportion of speaking and listening depending on situation... Ability to express one’s opinion adequately and to understand the opinion of the partner of conversation... Ability to steer the conversation on the right course...” etc. (Leontovych, 2003: 53,54). Individual question on the command of language only and if it is enough for successful intercultural communication revealed, that (95,16)% of respondents answered “no, command of language only is not enough for successful intercultural communication”, and only (4,03)% of respondents think that command of language only will be enough, herewith (0,81)% did not manage to answer. At the same time, (70,97)% admit that “respect to values” of other people is not as strong for us as to our personal values. In our previous researches we have mentioned, that the complete integrated

body of knowledge (sociocultural, linguistic, culturological, professional ones, knowledge of peculiar features, traditions, and behaviour of the partners), skills (of verbal and non-verbal communication, culturally-specific abilities and soft skills) and value orientations make the essence and the content of intercultural competence (*Skrypnikova, 2020*).

So, (95,97)% of future MMM mentioned that knowledge on intercultural differences is necessary for professional activity, and this again highlights the topicality of the issue under research. Also (91,94)% of respondents believe that tolerance to differences between cultures as a personal quality may be developed with the help of awareness of this cultures, as far as the divergence of relations, values and behaviour of people is culturally-based. Each personality forms own system of opinions and beliefs, in other words it has a certain range of cultural filters, through which we percept life. It is wrong to judge about other cultures from the viewpoint of our one, and (96,77)% of respondents agree with this, while (3,23)% did not manage to pick the answer. (73,39)% of respondents see the connection between the multicultural society and intercultural communication, (5,65)% do not think that this concepts are somehow related, and (20,97)% failed to answer the question. Analysis of the answers concerning ethnocentrism risks showed, that (55)% of respondents “can not answer” what are the risks, (30)% chosen such a dangerous aspect as “considering one’s own culture to be above other cultures”, (15)% admitted, that there is a risk of “conflicts” in case of ethnocentrism, and only (9)% of respondents had chosen the category of risks “nationalism, terrorism, chauvinism etc.”; it is worth reminding that these questions allowed several answers.

Basing on the previous theoretical analysis of the definition of the sense of “intercultural competence” concept, we have defined that intercultural competence of future Master of military management is a dynamic, integral, complex, professionally-personal, able for self-improvement formation, that contains cumulative knowledge on culture and its peculiar features (both one’s own and other representatives’), ability to apply practically the acquired knowledge, skills and experience in order to solve the tasks of intercultural communication and self-realization of future Master of military management in the process of interaction with the representatives of other cultures basing on creative and flexible approach, tolerance and sense of differences of other cultures (*Skrypnikova, 2020*). Taking into consideration the results of earlier studies, we have defined a number of the main criteria, which show the development of intercultural competence: culturological and speech knowledge and skills (command of language of other culture representative, values, differences from the culture of own country, wide reading, erudition, curiosity, deepening of one’s own culture-related knowledge, ability to take an adequate view of semiotic meanings and figures of speech of other culture), that was separated into a cognitive component (cognitive component of an affective-cognitive constituent) of the author’s model; the next criterion is a developed tolerance – no prejudice, tactfulness, avoidance of stereotypic thinking (affective component of affective-cognitive constituent); sociability – ability to create and maintain the atmosphere of trust, to avoid conflicts, to use non-verbal behaviour in concordance with the culture of a conversation partner, communication means, readiness and willingness to contact with the representatives of the countries of the world (personal component); self-reflection – ability to realize one’s own behaviour, actions, to admit mistakes – refer to personal component; personal motivation – professional strivings, internality in the sphere of professional achievements, professional interests and values, life goals (personal component); ability to do an improvisation – ability of considering objective and subjective factors, external circumstances while choosing the strategies of behaviour, spontaneous behaviour, ability to apply available communicative experience (communicative-and-activity component) (*Skrypnikova, 2021*).

Finally, to sort out what are the main characteristics of military specialists with the high level of intercultural competence, we have analysed and formed a “rating” of the most important qualities. Results of the analysis showed us, that (98,07)% underline the importance of “command of language of other culture representative”, it means that language is an important instrument of an intercultural communication. The next of the mentioned criteria in the rating is the knowledge on “peculiar features of a culture” (one’s own and representative’s one) (96,77)%. The third place of rating took “tolerance” and “ability to prevent conflicts” (improvisation) – (93,55)% each. The ability to apply the experience of intercultural communication, namely “Communicative skills” received (88,71)% of respondents’ votes. There were also mentioned such important features for the professional in intercultural communication, as knowledge of “values of partner’s culture”, ability to “avoid stereotypical thinking”, “tactfulness”, “openness for knowledge replenishment”, “readiness for intercultural competence”, possession of such psychological features of the person, like “empathy”, “flexible thinking”, “critical thinking” (pic. 3).



Pic. 3. Rating of important qualities of a specialist with a developed MC

4. Conclusions

Summarizing the research, we may make the following conclusions:

1. With the background of constant development of international contacts, international military cooperation, reformation of European and world educational orientation of Ukraine, it stays topical to achieve educational goals in training military specialists with the new type of thinking, able to act professionally, efficiently, creatively, applying all the potential of intercultural competence.

2. Analysis of the questionnaire results enables us to conclude that the issue of studying peculiarities of intercultural communication is important for the major part of students (91,1%). The latter are interested in the development of intercultural competence and acknowledge the need in increase of their intercultural awareness level and effective intercultural communication.

Analysis of the results witnesses that the reasons of conflicts are the obstacles in the intercultural communication, such as not knowing and not understanding the language, no tolerance, intercultural unawareness, behaviour, peculiarities of personal perception etc.

3. Professional training of future Masters of military management who are able to perform efficiently the tasks in complicated environment of international activity, shall be directed to the development of competencies containing getting soft skills. Taking into consideration the received results, we see fit for the development of intercultural competence, to recommend including to the content of educational process of HMEI educational programs, special training courses etc., the realization of which may be realized by implementation of modern innovative, interactive technologies involving the methods of active training. **An ambitious direction** of further research of the issue of development of intercultural competence of future Masters of military management in their professional training is studying current condition of their soft skills maturity.

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MYTHOPOETICS OF THE IMAGE OF THE MAIN HERO IN S. LUNOV'S OPERA "MOSCOW-PETUSHKI"

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Summary

The article analyzes the mythopoetics of the image of the main hero Venichka Yerofeyev in the opera "Moscow-Petushki" by the modern Ukrainian composer S. Lunov. The concept of "culture hero" and its explication on the image of Venichka Yerofeyev are considered. The etymology of the concept of "culture hero", its meaning both in archaic mythological thinking and in modern society is studied. It was found that for each epoch there is a culture hero, who is the personification of the dominant cultural values in society. The functions of a culture hero in society, his positive and negative traits and qualities of activity are considered. Based on the latter, the trickster features inherent in the culture hero, which were inherent in the original mythological thinking, but are relevant in our time, are emphasized. The history of S. Lunov's creating of opera "Moscow-Petushki" is considered, the libretto of the opera and V. Yerofeyev's poem of the same name is compared from the standpoint of genre and compositional features. It has been found that the mythopoetic image of the protagonist of the opera embodies both the features of a cultural hero and a trickster, which refers us to the original mythology, when these images existed syncretically. It was found that the cultural hero Venichka Yerofeyev embodies the following features: creative transformation of reality, cultural and organizational, mediation, protective and didactic.

Key words: myth, culture hero, trickster, Venichka Yerofeyev, composition.

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1. Introduction

One of the features of the development of culture of the XX and early XXI century was the growing interest in mythology. In modern culture, the universal features of mythological thinking are constantly reproduced, mythical issues, themes, systems of images, etc. are reconsidered and find a new embodiment. Characters of archaic, mythological notions are becoming increasingly popular research topics in the humanities, in particular, culturology and art history. One of such characters is a culture hero who transforms the world from a state of primordial chaos, and through his active mediation new values are created, the universe is established and maintained. A culture hero qualitatively changes people's lives through his inventions or discoveries of new things, thanks to which society makes a leap in development.

Today there are many forms of realization of a culture hero in almost all areas: art, science, business, administration, education and more. The presence of a culture hero in the art of music was no exception, in particular, the opera "Moscow-Petushki" by the contemporary Ukrainian composer S. Lunov.

Analysis of recent research and publications. The image of a culture hero and its manifestations in mythology and culture have been studied in various branches of the humanities: philosophy, culturology, history, etc. Among the scientific developments and explorations

there are works on the mythological essence of the cultural hero: K. Breysig (*Breysig, 1905*), P. Ehrenreich (*Ehrenreich, 1905*), A. Lang (*Lang, 1901*), Y. Meletinsky (*Meletinsky, 1995*), W. Schmidt (*Schmidt, 1933*), M. Eliade (*Eliade, 2010*), A. Pelipenko, I. Yakovenko (*Pelipenko, Yakovenko, 1998*), C. Lévi-Strauss (*Lévi-Strauss, 2001*), C. Jung (*Jung, 1996*), O. Hrytsenko (*Hrytsenko, 1999*), Yu. Bentia (*Bentia, 2020*) and others.

Numerous scientific investigations are devoted to the work of V. Yerofeyev, his poem “Moscow-Petushki”, which explores intertextual connections and allusions to various cultural texts, which directly borrowed or indirectly relied on the author in his poem, also in the works of A. Genis (*Genis, 1997*), S. Lashchenko (*Lashchenko, 2004*), M. Lipovetsky (*Lipovecky, 1997*), and others. Musicological explorations by N. Vasina (*Vasina, 2009*), O. Mozar (*Motsar, 2014*) are devoted to the peculiarities of S. Lunov's compositional work and his opera “Moscow-Petushki”, which was first analyzed in the context of the aesthetics of the absurd in the dissertation research of Ukrainian musicologist O. Motsar “Ideas of the theater of the absurd in the process of updating the musical theater of the last third of the XX – early XXI century” (*Motsar, 2016*). However, in the presented scientific investigations and publications devoted to this issue, the question of the mythopoetics of the image of the protagonist “Moscow-Petushki”, which plays a fundamental role in the formation of the opera, remains unsolved.

The aim of the article is to explore the mythopoetics of the image of Venichka Yerofeyev in the context of the features of a culture hero in S. Lunov's opera “Moscow-Petushki”.

This goal necessitated the solution of the following **tasks**:

1. to reveal the mythological essence of a culture hero;
2. to analyze the common and distinctive features of V. Yerofeyev's poem and S. Lunov's opera “Moscow-Petushki”;
3. to analyze the mythopoetic features of the culture hero in the image of Venichka Yerofeyev in S. Lunov's opera “Moscow-Petushki”.

The methodology is based on a systematic approach, historical and comparative, cultural and anthropological, logical and analytical methods, as well as scientific culturological, philosophical, literary and musicological explorations.

The scientific novelty of this article is due to the fact that for the first time the mythopoetics of the image of the main character Venichka Yerofeyev became the subject of a special musical and cultural study of S. Lunov's opera “Moscow-Petushki”.

2. Characteristics of a cultural hero as a mythological image

Myths about culture heroes are one of the powerful layers of oral folk art. In archaic myths, the culture hero is the personification of the power of the genus and becomes a propagandist of its ideology. He was respected on a par with the gods, because he often had a divine origin or was worshiped as a result of his activities. For the primitive community, the culture hero is the sacred ancestor of a tradition, rite, ritual that models the human beginning. In his activity he obtains, for the first time creates, finds or steals from the previous owner (supreme deity, spirit, etc.) various cultural objects and goods of civilization (fire, wild useful plants, tools, etc.), teaches people how to hunt, teaches skills in science, art, agriculture, crafts, norms of social life and sacred rituals, introduces a certain social organization, marriage rules, magic prescriptions, rituals and holidays.

For all cultures at the stage of primitive thinking culture heroes are the same, and their actions are aimed at cosmization of existence: the separation of earth and water, the emergence of modern terrain, celestial vaults and lights, the creation of wildlife and people, the

organization of natural processes – change of day and night, season, the alternation of tides, the origin of various natural phenomena, etc. Thus, the culture hero performs a civilizing function, marking with his name a tradition, a ritual that is preserved from generation to generation. Often he carries out the activity in parallel worlds. It should be noted that movement and dynamics are extremely important for him. Almost all of his images are characterized by motives for search, travel, adventure and, in general, active movements in the cultural space (Hercules, Theseus, Perseus, etc.).

The term “*culture hero*” was first introduced by the German historian, sociologist, philologist K. Breysig, who used the German word “*heilbringer*” to denote it, which literally means “savior”. In the interpretation of K. Breysig (*Breysig, 1905*), it was believed that the culture hero underwent an evolution from semi-zoomorphic ancestral spirits to anthropomorphic gods, who later became a figure of the supreme deity. The travels of a culture hero are attempts by people to realize various things and phenomena in nature, in particular, the alternation of day and night, the movement of celestial bodies, and others. However, the German anthropologist and ethnographer P. Ehrenreich (*Ehrenreich, 1905*) denied the interpretation of K. Breysig and believed that the culture hero is an emanation of a higher deity and has an astral nature.

It should be noted that the concept of “culture hero” from the beginning of the XX century was interpreted differently. Numerous researchers (A. Lang (*A. Lang, 1901*), W. Schmidt (*Schmidt, 1933*), E. Durkheim (*Durkheim, 2018*), S. Tokarev (*Tokarev, 2008*), H. Tegnaeus (*Tegnaeus, 1950*), Y. Meletinsky (*Meletinsky, 1995*)), find common features inherent in the image of a culture hero, namely his connection with the ancestors and creators-demiurges, partly with the “first people” (A. Lang), who are often the founders of the genus and introduce rites and cults. All actions, including the creation of the earth and people, are also associated with the culture hero. Researchers note that a culture hero could not be an ordinary person, adored by death, he could only be a hero who was attributed to the divine character and supernatural powers, which he possessed during his earthly life. The culture hero is associated with the higher deities and subordinates to them, but does not become sacred.

Thus, in different mythological systems, culture heroes do not necessarily have a sacred character and differ from “real” gods, because they can be associated with ancestral spirits, totems, prominent mythical, semi-legendary or real historical figures. However, an integral part of his work is a magical power without which the actions of a culture hero would be unthinkable. With the separation of the pantheon of higher gods, the culture hero can act as an assistant or arbiter between the worlds of gods and people, but at the same time conflicts between gods and culture heroes can arise.

It should be noted that a culture hero can be not only a person but also an animal with zooanthropomorphic features. He can also be a fighter against the natural phenomena of nature, which in turn are personified through the images of monsters and demons trying to destroy the already established order. Thus, etiological myths acquire the features of a heroic story, as the culture hero fights and guards the homes of people. Thus, the Africanist H. Baumann (*Baumann, 1964*) notes the teratomorphic (translated from the Greek “monster”) and clownish aspects of the culture hero.

The American anthropologist P. Radin (*Radin, 1999*) emphasizes the primary independence of the culture hero and the supreme deity, but notes that gradually their features began to mix, the culture hero increasingly embodied the features of a higher deity and became the creator or transformer of elements of nature and culture.

Y. Meletinsky and W. Schmidt emphasize the mediation inherent in the culture hero, because he is the arbiter between the world of gods and the world of people. The German

researcher emphasizes five types of culture hero: 1) a defender who frees people from the evil monster. He is an image of fantastic tales and epic poems; 2) creator of objects of culture and civilization, teacher; 3) the “great legislator”; 4) sage/prophet, he establishes ethical and religious forms, introduces ceremonies and holidays; 5) organizer and compiler of the world (*Schmidt, 1933*).

Extremely important in the field of mythopoetics are the studies of the Russian philologist, cultural historian Y. Meletinsky, who defines the general functions of a culture hero: 1) the creation of the world or its revival from Chaos; 2) the fight against the mythical monsters of Chaos, which are the carriers of the destructive elements of the mythical chronotope; 3) the creation of people; 4) introduction into the social world of culturally significant objects of the material plan and spiritual values; 5) demonstration of certain goals to be pursued in order to identify with the mythological hero, discovering new individual opportunities for personal development; 6) mediation between worlds in the mythological model of the world (*Meletinsky, 1995:178*). We will add another important aspect on which Y. Meletinsky emphasizes – the connection of the culture hero with the mythical time, because all his actions are “a metaphorical code by which the structure of the world, natural and social is formed” (*Meletinsky, 1995:172*).

According to culturologists A. Pelipenko and I. Yakovenko (*Pelipenko, Yakovenko, 1998*), the culture hero in his constant meaning, as a sacred improver of the world, teacher, inventor and winner of anti-cultural chaotic forces, was formed as a result of gradual separation from syncretic unity with the functions of demiurge. Another culturologist and historian, A. Gurevich, defines a culture hero as one of the central characters of ancient mythology, “who imparts to the team the knowledge and skills that are vital to the existence of society” (*Gurevich, 2009:22*).

It should be noted that the actions of a culture hero are not always aimed at improving human life, but always provoke historical change. Often the negative backup of a culture hero competes with his twin brother and at the same time can be endowed with comic and demonic traits, acting as a trickster. If a culture hero does not have a twin brother, he combines serious actions and clownish antics in his person. In etiological myths, the images of a culture hero and a trickster represent a single whole. Their separation was a later stage in the development of mythology.

The genesis of the culture hero took place in two directions: 1) God-Creator or mesiah (as well as the ancestor) or 2) epic hero (for example, Ilya Muromets, Dobrynya, etc.). Some features of the culture hero can be found in the activities of the gods (Enki and Enlil in Sumerian, Odin in Scandinavian mythology, etc.), because they not only create the world, but also perform cultural acts. Thus, as researchers note (B. Ivanov, S. Tokarev, V. Toporov (*Tokarev, 2008*) etc.), in the process of transition from the cosmological and the divine to the historical and human, it is as if the last representative of the cosmological series is combined with the first representative of the historical. At the junction of these two series, a culture hero emerges, who completes the arrangement of space, but in its human dimension.

As already mentioned, in the process of culturogenesis, the culture hero took on the functions of a mediator, a mediator between the transcendent-sacralized creator and the world of profane reality. It should be noted that such mediation is dynamic and during evolution has created a plurality of mythological, folklore, literary images. Unlike the metaphysical creator-demiurge, who directly creates things and organizes them in the cosmic order, the culture hero usually improves, perfects and extracts things that already exist in existence. We can say that the culture hero as it were “translates a thing from an ideally eidetic to a utilitarian-pragmatic plan. On the other hand, the culture hero never completely merges with the profane world” (*Pelipenko, Yakovenko, 1998:130*). Thus, occupying an intermediate place between

the creator-demiurge and ordinary people, the culture hero defines his “semi-sacred nature” (A. Pelipenko, I. Yakovenko) as a mediator.

Being in the position of a mediator, the culture hero combines features of restoration of the destroyed, reproduction of the lost, reconstruction of blurred and profaned sacred traditions, as well as features of innovative creativity, various discoveries and inventions. His motives and forms of activity are generally subject to the causal laws of reality, although they always contain elements of the heroic, superhuman and supernatural.

As culture developed, various types of cultural activities appeared, and accordingly the spheres of manifestation of the functions of a culture hero. In particular, the concept of culture hero is applied to the heroes of the epic, characters of history, art, outstanding personality, whose activities, in terms of prevailing morality, aesthetics and taste, are extremely positive. Such culture heroes can be heroic romantic personalities (according to T. Carlyle (*Carlyle, 2008*)), superman (according to F. Nietzsche, “Übermensch” (*Nietzsche, 2007*)), charismatic leader of the masses, wise dictator, universal genius, artist-prophet and creator of a new reality, values and world foundations.

3. Poem / opera “Moscow-Petushki”

V. Yerofeyev's poem “Moscow-Petushki” is a pseudo-biographical postmodernist composition written in 1969 and widely distributed in underground press. Officially in the USSR, the poem was published in shortened form in the issues of the magazine “Abstinence and Culture” № 12 (1988) and № 1-3 (1989) during the anti-alcohol propaganda of Mikhail Gorbachev. In this edition, the poem “Moscow-Petushki” had a large number of errors, bills, which distorted the basic meaning, which was invested in it by V. Yerofeyev. Only in 1989 was the composition published in full by Prometheus Publishing House.

The protagonist of the poem is the intellectual alcoholic Venichka Yerofeyev, who appears as the author's alter ego, because the author gives him his name, and thus he seems to accept all the sins, suffering, death, which he describes in the first person. There is a certain mystical connection between the author and the protagonist of the poem, because in the composition Venichka Yerofeyev dies from the fact that his throat is pierced with an awl, and in reality, V. Yerofeyev died from throat cancer.

S. Lunov became acquainted with the poem “Moscow-Petushki” in 1990 after the death of the author of the poem. In the same year, the composer began to create a libretto, and in 1991 he began to write music. The composer got acquainted in more detail with the work of V. Yerofeyev in the form of a theatrical play, which took place in the “Mirror” theater. S. Lunov worked on the opera for 21 years (1991-2012), he considered it one of the most important in his creative work. The composer felt the urgency of the plot of the poem at the turn of the era, when the Soviet Union collapsed and new states began to be created (*Motsar, 2016*). The plot of the opera is based on the journey of the main character Venichka, which is a search for a lonely soul and its “thorny” path to Paradise.

In addition to the main literary source, the composer uses in the libretto and other texts of V. Yerofeyev, in particular, excerpts from the play “Walpurgis Night or Steps of the Commander”, “Notes of a Psychopath”, Notebooks of the writer. S. Lunov also makes text notes in the libretto (compared to V. Yerofeyev's poem – the composer does not include in the libretto an episode with the revolution in “Moscow-Petushki” and some stories of fellow travelers, etc.), because the genre basis of the opera “Moscow-Petushki” is a dramatic text, where the action that took place in the poem must be dominated by descriptiveness. However, this does not affect the perception of the poem, because it does not lose its main semantic core.

It should be noted that both in the poem and in the opera, there are introduced mythologized infernal images, which emphasize the demonization of all events that take place and indicate the persecution of the protagonist's Fate. However, unlike the poem, the composer introduces into the libretto not only the images of the Sphinx and Satan, but also the generalized image of "Someone". Comparing these images in the text of the libretto and the poem itself, we would like to note that V. Yerofeyev divides the images of the Sphinx and Satan, while S. Lunov unites them, reduces them to a single general infernal sinister image, which at certain stages of the plot will appear behind different faces. The pervasive infernal line is emphasized by the reincarnation of this image(s) from Someone (which at first does not frighten at all) through the mysterious-mystical Sphinx to the fatally horrible image of Satan. In our opinion, there is a very interesting subconscious comparison with the Trinity (God the Father, God the Son and the Holy Spirit) in an inverted form. This is the other side of our world, its reverse side and, in a sense, desacralization, as well as the possibility of warning of an apocalyptic future that may come unexpectedly quickly. In the opera, this is reflected in the timbre of the low-key instruments, the use of a rhythm reminiscent of footsteps, and the use of texts from the requiem Mass – Dies irae, Tuba mirum, Benedictus, when Satan himself appears.

Among the differences between the libretto and the text of "Moscow-Petushki" there should also be mentioned the role of the Sphinx. Throughout the opera, it is a pervasive image that appears in the most crucial moments of the protagonist's life. That is why the Sphinx becomes one of the main factors in the development of the plot, its dynamization and reflection of the events that take place on the way and become almost key in the dramaturgy of the opera. In V. Yerofeyev's poem, the Sphinx will appear only during the culmination before the appearance of Satan, when the fate of Venichka is decided.

Comparing the text of V. Yerofeyev's poem "Moscow-Petushki" and the opera by S. Lunov, we note that the composer begins the opera from the end of the text of the poem. That means, he uses the episode used at the end of the poem and puts it at the beginning of the opera as a prologue: "Once upon a time, in Lobnya, near the station, a man was killed by a train, and incomprehensibly killed..." (*Erofeyev, 2016:172*). The listener of the opera does not yet know about the death of the main character at the end of the story. However, in this way, the composer from the very beginning anticipates the tragic outcome of the opera itself – the death of Venichka. According to O. Motsar, who in her dissertation research "Ideas of the theater of the absurd in the process of renewal of the musical theater of the last third of the XX – early XXI century" was the first to analyze S. Lunov's opera "Moscow-Petushki" in the context of esthetics of the absurd, gives the features of an epic story: "This technique removes the action, gives the features of an epic story: you feel the view from the side, the establishment of an initially defined time distance. The very name "Lobnya" gives an allusion to the place of the Skull (in Rus. "Lobnoe place"): on the one hand – Red Square in Moscow, on the other – Golgotha (which for Venichka becomes one and the same place, because it is on Red Square where Four crucify him). This technique allows you to draw a parallel with the genre of Passions" (*Motsar, 2016:142-143*).

Agreeing with the arguments of the Ukrainian musicologist, it should be added that the composer "removes" the tragic beginning, making it anti-tragic. From the very beginning of the opera there is a tendency towards parody, frivolity, play, destruction of traditional stable norms and values of human life, and he emphasizes the trickster beginning of the cultural hero in the opera. This approach of the composer speaks, on the one hand, about "the need to preserve the uniqueness of one's own life world regardless of the situation" (*Kryvosheya, 2004:161*), and on the other about a certain awareness of one's powerlessness before being.

4. The image of a cultural hero in S. Lunov's opera "Moscow-Petushki"

The protagonist of S. Lunov's opera "Moscow-Petushki" Venichka Yerofeyev has the features of both a culture hero and a trickster, as he combines serious actions and clownish antics. This combination was inherent in the primary mythological origins, when the cultural hero and the trickster existed in syncretic unity.

As a culture hero, Venichka creates his own mythologized world, which is ideal for the main character and reflects the real one. Thus, in the opera "Moscow-Petushki" two worlds are opposed: the real, where the protagonist is a citizen of the USSR, a passenger of an electric train and the world, which the protagonist builds in his mind by means of constant self-reflection through alcohol intoxication, namely memories = delusions = hallucinations of Venichka (conversation with Angels, God, Someone, Sphinx, Satan, etc.). It should be noted that in his mythologized world Venichka appears in a lyrical, sublime context, namely as a man of high morals, an ideal lover, which is in stark contrast to his lower side in reality. This comparison of worlds indicates the dual nature and ambivalence of the protagonist, because in the world of consciousness of the hero Venichka appears as a cultural hero, and in the real world the protagonist has more traits of a trickster.

In the real world, Venichka confronts the realities of Soviet society and cannot take root in any of its social environments. He disagrees and tries to oppose Soviet ideology. However, Venichka never shows aggression in conflicts – neither in the situation with the restaurant, when he was thrown out into the street, nor in the scene with the Four Enthusiasts, who humiliated and criticized the main character for delicacy and high morals, nor in the final scene, when Venichka is attacked and killed. He tries to resolve the conflict through constructive dialogue. The motive of confrontation is also inherent in the culture hero, who is a fighter against the hardened foundations of the world.

Venichka clearly organizes his world of consciousness in the mythologized time and space, which is one of the features of a culture hero, because his actions are aimed at organizing life. Important for the protagonist of the opera are the places to which he attaches special mythological significance, namely: Kursk railway station, which symbolizes the beginning of the journey, as well as the life of the protagonist; Petushki – the image of an unattainable paradise, which Venichka cannot reach; traveling by electric train from Kursk railway station to Petushki is the life path of the protagonist, because the world of the electric train for Venichka is the whole universe, which is divided by clear boundaries-stops (names of pictures in the opera); the Kremlin is a myth of the Soviet state; Moscow, which appears as the embodiment of hell, because it is in Moscow that the most terrible events happen to the hero (including his death).

The main meaning of Venichka's existence in his mythologized space is his son, who appears in the opera / poem as a priceless treasure, is the personification of the hero himself. It should be noted how the author of the poem depicts the image of the protagonist's child – he uses the word "baby", although the child is three years old. In our understanding, the image of a "baby" is an image of a defenseless creature in need of care, love, and it is also an image of hope for the future. Perhaps in this way the protagonist relates himself to the baby, namely, to a person who also needs love and care, but under some circumstances did not get it.

Venichka Yerofeyev as a culture hero appears as a kind of teacher for fellow passengers on the train, Four enthusiasts from the dormitory. It should be mentioned that the protagonist is an intellectual who impresses us with his education and literacy. In his reflections he constantly relies on the facts of history and culture, on literary and biblical texts, prominent figures, and so

on. Despite the “low” topics he discusses, in particular, the question of the unpredictability of howling, its main content and inner meaning are filled with deep philosophical meaning.

In the Third Interlude of the opera, S. Lunov introduces images of He and She, who represent the ideal mythological twins of Venichka and his beloved woman. Thus, there is an opposition of two polar pairs of real and ideal images, the real and the ideal world. The composer emphasizes this at the level of musical language. The interlude is built in a three-part form, the extreme fragments of which are full of lyricism, ario in nature, the music is sublime and light. Quite the opposite nature of the music in the middle: the vocal language of the characters becomes more expressive, declamatory and recitative intonations prevail, the language is quite chaotic, fast, confused, and the orchestra becomes more colorful and dynamic, which sounds contrasting to the beginning and end of the interlude and levels the thoughts of Venichka about ideal love.

It should be noted that the protagonist of the opera / poem is constantly on the move, which is also one of the characteristics of the cultural hero and trickster, which, as it was correctly mentioned by M. Lipovetsky (*Lipovetsky, 2009*), are almost always depicted as a “man of the road” (which is totally about the opera / poem “Moscow-Petushki”). For Venichka, such regular trips are the basis of his life. Violation of this movement, namely coming to the Red Square, would break the cycle and mean death for Venichka. Thus, in the life of the protagonist there is an “eternal return” (according to F. Nietzsche), which is for him not just an opportunity to repeat any phenomenon, not only a return to himself, but also the inability of Venichka to break out of life, because all this is a constant movement in a circle.

In the third picture of “Moscow-Serp i Molot” by S. Lunov's opera, the protagonist has a monologue/dialogue with the Lord God. In terms of music, there is a comparison of confused and pleading intonations, there are large ascending jumps, seconds (intonations of prayer/crying) of Venichka and the part of God that is recited. S. Lunyov used various sound effects – the voice of God sounds distant, and is constantly reflected in the echo. Thus, the effect of the Lord's presence is achieved not as a close interlocutor, but as one who is everywhere.

Venichka in the opera “Moscow-Petushki” appears as a twin of the main character of the musical composition – Jesus Christ, because according to the Russian literary critic E. Smirnova, “Venichka is Jesus Christ, who is in an earthly, profane, inverted world” (*Smirnova, 1990:64*). Such ambivalence makes it possible to turn a comedy into a tragedy, creates “unusual profane possibilities of a comedian” (A. Pelipenko, I. Yakovenko), so the language of opera / poem is characterized by semantic duality of words, music and image, in which the story of Venichka-writer, an intellectual of the protagonist of the poem, a servant of language is embodied in the story of a servant of alcohol, a marginal, who, on the one hand, destroys all conceivable and unthinkable canons of Soviet life, and on the other, creates the opportunity to be a “sacred profligate” (*Pelipenko, Yakovenko, 1998*).

Like the culture hero, Venichka has a feature of mediation, he is constantly on the border between the real and unreal world, namely the world of his painful consciousness. He is able to have a dialogue both with the characters of the real world – Waitress, Bouncer, Controller Semyonch, and with representatives of the afterlife: beings of higher order – Angels, God; infernal images – Someone, Sphinx, Satan; images that are an expression of certain features that are necessary for the hero's self-identification – Venichka's companions: Vusaty, Mitych, Onuchok (Grandson); images of their delusions – Duchess, Old, Grandmother and others. Thanks to Venichka's trickster features, in the poem/opera by Yerofeyev/Lunyov they are turned over, accents in permanent axiological models are rearranged, the process of alienation of consciousness from certain constant values is softened, thus consciousness is

freed from existential experience of “true blessings”. This fact is extremely important for us, because passing through all possible semantic cultural values, Venichka Yerofeyev does not linger on anything seriously, he is in a constant dynamic formation, provoking the search for new meanings in life.

5. Conclusions

The characteristics of the image of a culture hero, his role in archaic mythology and modern musical art are presented. It is noted that the following functions are characteristic of a culture hero: 1) creative, because he creates/ revives the world from the initial Chaos, creates people; 2) protective – he protects people from mythical monsters; 3) cultural and organizational – he teaches people the art and the introduction of spiritual values, the organization of socio-cultural relations within society; 4) didactic – he teaches people different crafts, organizes their lives, promotes personal development, because often a cultural hero is an example to follow; 5) mediation – mediation between worlds. It is determined that in the modern world the culture hero is present in almost all spheres of social activity, he embodies and promotes the dominant values and moral attitudes to society.

It was studied that the activities of a culture hero are not always aimed at exceptionally positive changes in human society, which makes him close to the image of a trickster, however, it is what provokes historical change. The combination of these images is inherent in primitive mythology, when the culture hero and the trickster existed syncretically. Therefore, the image of a culture hero reveals an ambivalent and dualistic nature, as it combines both serious activities aimed at cultural creation and clownish behavior.

It is noted that ambivalence in S. Lunov's opera is manifested at different levels. This is a comparison of the characters of Venichka and Ruda and their ideal twins (He and She), what creates a relationship of two poles – sublime and serious (He and She) and low and clownish (Venichka and Ruda); comparison of mythologized and real worlds (in the opera Venichka appears as a declined twin of Jesus Christ). In addition, Venichka Yerofeyev as a culture hero acts as a mediator between the real world and the unreal (the world of his consciousness); he creatively transforms and organizes reality (creates its own mythologized world, which is clearly organized in space and time); he is constantly on the move (regular trips of the protagonist to the Petushki, symbolizing his life's journey to Paradise and the obsession of the movement, because his travels are constantly repeated); he tries to oppose the dominant rigid moral foundations of Soviet ideology (resolves conflicts through constructive dialogue), appears as a teacher who promotes his own worldview. The mythopoetics of the image of the main character in S. Lunov's opera “Moscow-Petushki” considered in the article can be used for further explorations and researches.

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TECHNOLOGY AS MOTIVATIONAL FACTOR IN INTERPRETERS PROFESSIONAL TRAINING

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Summary

The article researches the problem of increasing the motivation of future interpreters' professional training by using information and communication technology (ICT). The author considers the motivation of students of higher education institutions as a necessary component of the educational process. Teachers try to capture the attention of students through various methods and techniques. The aim of this research is to explore how technology could be used to increase future interpreters' motivation. For this purpose a questionnaire was administered to 76 students at Vinnytsia Institute of Trade and Economics of Kyiv National University of Trade and Economics. The analyses of the research data have proved that effective future interpreters' professional training can be possible by means of technology. It also revealed the fact that students want their teachers to use ICT at their lessons more often. It was found out that technology was a dynamic and challenging motivating factor and there may be some suggestions focusing on the achievement of learning objectives.

Keywords: motivation, ICT, interpreter, professional training, distance learning.

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1. Introduction

Foreign language teaching methods and techniques have been changing for ages. Learning a foreign language is rather difficult process. That's why students need motivation and encouragement all the time. Antonivska points out that motivation is the most important foundation for success in the process of languages learning (*Antonivska, 2019*).

E-learning is as an integral part of the educational process (*Havryliuk et al., 2020*). Thus, technology might be one of the key factors positively affecting students' attitude towards learning process. Today it has become considerably cheaper and more accessible all over the world. According to recent data, 5 billion people use mobile devices. The growing application of mobile devices and wireless technologies enable us to access any type of material (both training and instructional) from anywhere and at any time.

Recent researches have shown that technology-enhanced environments can significantly increase students' motivation and improve students' productivity (*Prensky, 2007; Roblyer & Doering, 2010*). As far as professional interpreting is concerned, we should mention technology has always played a considerable role in it. What is the real impact of technology on professional training of future translators' motivation? In this publication, we tried to answer this question by examining the results of previous research.

2. Literature review

We have analyzed studies on interpreters' professional training. As a result, we have formed three groups of them. The first one researches the interpreters' professional training aspects, i.e. professional competence (*Olkhovska, 2018; Rogulska, 2010*); multicultural competence (*Motsar, 2018*); information competence (*Tarasenko, 2017*); professional qualities (*Koknova, 2014*); translation culture (*Kozak, 2001*); professional ethics (*Semyhinivska, 2014*); intercultural competencies (*Bakhov, 2011*); socio-cultural competence (*Holub, 2010*); information and technological competence (*Kolos, 2010*); professional communication (*Sobol, 2005*); vocational and communicative competence (*Pidruchna, 2007*); the second group of scientific publications consider various methods of teaching translation, i.e. teaching consecutive scientific and technical interpreting (*Volodko, 2018*); teaching the written translation of scientific texts into French (*Ihnatenko, 2017*); forming the linguistic personality of a future translator in the process of the Ukrainian language teaching (*Horoshkin, 2017*) etc. The third group of publications is aimed to research translators' training in foreign countries, i.e. organization of future translators' independent learning activity at US universities (*Nakonechna, 2018*); development of the specialized translator training system in the USA (*Martyniuk, 2012*), and translators' professional training in UK universities (*Serheeva, 2012*) etc.

As far as ICT as motivational factor of future interpreters' professional training is concerned, we should state students are more motivated and interested learning due to ICT. According to A. Kok, ICT has the capabilities to motivate, enrich and encourage students' skills and knowledge (*Kok, 2007*).

Heemskerk et al. pointed out that "information and communication technology (ICT) in education is assumed to contribute to educational equality due to its motivating effects on students and the opportunities it offers for facilitating differentiation and individualization" (*Heemskerk et al., 2012*). Authors consider ICT as a main learning source providing unlimited access to knowledge. Harmer (*Harmer, 2007*) told students could become more active and dynamic learners by means of online training. The scholar points out the value of computer-based classrooms providing students with unreachable activities which motivate them.

According to Crook, ICT is considered as a present in distance learning where learners perform and work in a collaboration form. E-learning, virtual learning and blended learning are provided by ICT; it also diverse learning software's to the students (*Crook, 2011*). Porter et al. regarded that learning motivation could both guide individual learning goals and activate learning behaviors strengthening the cognition process and improving the learning results (*Porter et al., 2012*).

Kirkwood is convinced the technology encourages students in constructive learning and knowledge building creating a context-free environment. ICT improves the students learning skills teaching by doing facilities (*Kirkwood, 2014*).

Yoloye indicated that the application of ICTs has greatly changed the higher education. The students aren't the passive learners, they have become active ones due to ICTs (*Yoloye, 2015*)

Anderson and Speck state that technology motivates the learners engaging them in speaking, reading, listening and writing far easier (*Anderson et al., 2001*). The demand of technology and distance education has increased rapidly nowadays. According to Shivangi Dhawan, "online teaching is no more an option, it is a necessity" (*Dhawan, 2020*) because a deadly disease called Covid-19 caused by a Corona Virus (SARS-CoV-2) shook the entire world. As a result, lots of students all over the world study online; blended learning is also widely used.

We think using technology, internet, authentic materials, videos, blended learning and distance education are good and effective solutions to overcome students' motivational problems teaching both in the classrooms and online. Thus, this research aims to find out the role of technology on the motivation of future interpreters.

3. The information and communication technologies: concept and importance

Modern society is defined as post-industrial (information) as the informatization of science and education is carried out. The emergence and development of the information society involves widespread application of ICT in education, which is determined by many factors. This commonly used term includes all technology used to communicate and work with information.

The concept of information technology was added to the element communication and emerged in the 1980s. Nowadays ICT includes both hardware and software. Their capabilities are widely used during the educational process. That's why ICT is considered an educational technology. There are lots of its definitions in educational environments. So, UNESCO defines ICT as "diverse set of technological tools and resources used to transmit, store, create, share or exchange information". ICT carries out lots of communication and information functions and provide many benefits for humans. These technologies give us universal access to education providing anytime and anywhere learning facilities. Teleconferencing as one of the latest learning techniques has been widely used recently. It changes both teaching and learning process turning classroom into an active learning environment with active learners.

As far as the importance of the ICT is concerned, we should mention it gives quick access to a wide range of learning resources anytime and anywhere. The information provided by ICT is both valid and up to date. Most online libraries have become more accessible due to them. They have diversified different subject teaching making it interesting and motivating. Nowadays it has provided the facility of distance education around the world facing an unprecedented challenge of COVID-19.

4. Motivation: concept and types

Motivation comes from the Latin; it means to move. Thus, motivation is an external force accelerating a response or behavior. Motivation is an important component of any human activity. It is so-called internal engine; the desire of man to succeed in different activities searching answers for various questions. Motivation is the interests, needs, aspirations, emotions, beliefs, ideals, attitudes motivating students to action. The higher the level of motivation, the more factors motivate the student to activity, the greater the results he / she can achieve.

There are two types of motivation, i.e. extrinsic and intrinsic. The first one is related to 'tangible' rewards, i.e. benefits, promotion, security, and work condition.

Extrinsic motivation is fundamental for motivated behavior. Self-generated factors influencing people behavior in a particular way or moving in a particular direction are defined as intrinsic motivation. It arises from having "a strong emotional interest in an activity and a sense of freedom and autonomy related to it" (Hashmi Z. *et al.*, 2019). The analysis of basic concepts shows that the motivation is characterized by either a positive factor (reward, success, prestige, etc.) or negative (punishment, fear, lack of authority, etc.). That's why scholars speak on positive and negative types of extrinsic motivation, i.e. positive and negative extrinsic motivation.

5. Role of ICT in students' motivation

None of learning technologies will work without proper motivation involving moral and psychological stimulation of educational activities because motivation promotes lifelong learning. ICT develops curiosity, improves thinking and reasoning skills of the learners. So, we can argue about its motivational features. However, ICT and student's motivation have no direct effect. Both domestic and foreign scholars are convinced ICT is the key of learning providing lots of advantages. Firstly, ICT develops concentration among the learners. A lesson delivered through ICT is more interesting for the students than the normal one. If ICT is applied then learners take more interest in the learning. As a result, their commitment to the task also increases. Using ICT learners discover and explore real life things; it is more beneficial and motivating than listening.

6. Research methodology

This study was aimed to investigate the role of ICT in the motivation of the future interpreters' professional training. The targeted population of the research is bachelor students (specialization in Germanic languages and literatures (including translation), first foreign language – English) using ICT in their learning. The accessible population consists of the students of the Vinnytsia Institute of Trade and Economics of Kyiv National University of Trade and Economics. Total population of the research is 76 students. They were offered questionnaire to give an awareness of the real motives for the ICT application. There were 15 questions about technology and how to use it as a means of motivation.

7. Results and discussion

Findings based on the relation between use of technology and motivation can be seen in Table 1. It shows that 60 students (78.94 %) want to have all their lessons with technology. 54 students (71.06 %) say that authentic materials taken from the Internet make them active. 59 students (77.63 %) think that computer-based classrooms make the lessons more enjoyable. However, 7 students (9.21 %) are convinced technology can be boring and unnecessary. 71 students (90.79 %) don't agree with them. 49 students (64.47 %) are sure they can understand language better when technologies are used by teachers in the classrooms. 59 students (77.63 %) think that they always need technological materials in the classrooms. 54 students (68.42 %) want different technological devices for motivation. 56 students (73.68 %) think that lessons can be more enjoyable with PowerPoints.

Table 1

Effect of ICT on future interpreter's motivation

No.	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	2	3	4	5	6	7
1	We should use technology in our classroom for every lesson	10.52 %	68.42 %	13.16 %	5.26 %	2.64 %
2	Authentic materials downloaded from the internet make me active in the learning process	13.16 %	57.90 %	10.52 %	13.16 %	5.26 %

Table 1 (Continued)

1	2	3	4	5	6	7
3	Computer-based teaching activities make the lessons more enjoyable	25 %	52.63 %	15.79 %	3.94 %	2.64 %
4	Technology can be boring and unnecessary	2.64 %	6.57 %	25 %	50 %	15.79 %
5	I can understand language better when my teacher uses technology in the class	15.79 %	48,68%	27.63 %	5.26 %	2.64 %
6	We always need technological devices in language classrooms	13.16 %	64.47 %	15.79 %	3.94 %	2.64 %
7	Different technological devices should be used in the class to increase my motivation for learning English	10.52 %	57.90 %	13.16 %	9.21 %	9.21 %
8	If my teacher uses PowerPoint presentations, lessons can be more enjoyable	9.21 %	64.47 %	15.79 %	6.59 %	3.94 %
9	When we use technology every time, it makes the lessons boring	2.64 %	10.52 %	27.63 %	57.90 %	1.31 %
10	Films, videos, CDs and e-learning can be helpful to develop my language skills	10.52 %	68.42 %	13.16 %	6.59 %	1.31 %
11	I should use technology during the project works in classes	15,79 %	52.63 %	13.16 %	13.16 %	5.26 %
12	If we have a chance of teleconferencing via distance education with other universities, it can be challenging for me	9.21 %	57.90 %	15.79 %	9.21 %	7.89 %
13	My teacher should use more technology in the classrooms	22.37 %	52.63 %	15.79 %	3.94 %	2.64 %
14	Computer-based lessons are more enjoyable and effective than traditional lessons	9.21 %	64.47 %	15.79 %	6.59 %	3.94 %
15	Use of technology in our language classrooms increases my motivation	10.52 %	68.42 %	13.16 %	5.26 %	2.64 %

Only 10 students (13.26 %) think that technology can be boring when it is used every time. 60 students (78.94 %) believe that they can develop their language skills with authentic films, videos, CDs and e-learning. 52 students (68.42 %) say that they should use technology in order to develop their projects. 51 students (67.11 %) are sure that teleconferencing with the other universities via distance education can be challenging. 57 students (75 %) want their teachers to use more technology in the classroom. 56 students (73.68 %) students say that computer-based lessons are more enjoyable and effective than traditional ones. 60 students (78.94 %) that using technology in classrooms increases their motivation.

8. Conclusions

The analyses of the research data have proved that effective future interpreters' professional training can be possible by means of technology. It also revealed the fact that students want their teachers to use ICT at their lessons more often. The responses have showed that most students are convinced using technology increase their motivation. According to our research, future interpreters' professional training seemed to be affected by diverse technological equipment, i.e. computers, video, films, the internet, e-learning and multi-media. Thus, there is a great relation between language-learning motivational factors and using technology. The respondents also believe that teleconferencing via distance education with other universities could be challenging for them. The use of technology provides meaningful and interesting process in language learning and students can be more motivated.

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DENISE LEVERTOV'S POETIC EGOCENTRICITY: ESCAPING THE REALITY OF SHIFTING THE PERSPECTIVE

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Summary

The article deals with the investigation of the egocentricity actualization in the poetic texts. Egocentricity is viewed from the perspective of self-reference reflected in the literary texts. The materials selected are the poetic texts of Denise Levertov that unveil different thematic lines with the emphasis on the thematic line of war. Poetic egocentricity, therefore, is defined as the involvement of the author into the text through ego-marked metaphorical propositions. These ego-oriented constructions open access to author's egocentricity via reader's involvement into the text imagery. According to the results obtained, the thematic lines of Levertov's poetry highlight the topics of divine, life, love and war. However, we observe a low percent rate of the egocentric metaphorical propositions compared to the general scope of war-oriented thematic constructions. Consequently, we may state that such a comparatively low author's involvement into the war theme could be viewed as a deliberate intention to escape the reality by shifting the perspective from the self-referential plane.

Keywords: self-reference, American female poetry, cultural context, conceptual space, literary concept, poetics, cognition.

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1. Introduction

Poetic texts express a high subjectivity level reflected in the specific textual organization and author's choice of literary devices that unveil egocentricity. The conceptual picture of the poetic text is the result of its subjective creation and interpretation; therefore, for its reproduction, the worldviews of the author and the reader (interpreter) are taken into account.

2. Background review

Investigated from different perspectives, poetic texts remain in the center of numerous researches due to specifics of their organization. Poetry unveils a unique way of thinking, reflection and self-reflection (*Kubryakova, 2004: 465*). Starting with Aristotle's poetics (*Aristotle, 1976; 1998*), these issues have been addressed to from different angles in frames of dominant scientific paradigms. Despite the numerous approaches, the author's presence phenomenon has been in the center of the researchers' attention. The dominant position of this issue may be explained by a high subjectivity level of poetry due to the author's intention to reflect a peculiar worldview in the poetic text (*Semino, 1997: 80*). Moreover, the poetic picture of the text is born through the interaction of the author (creator) and the reader (interpreter) (*Ostrov's'ka, 1999: 43*). As the result, the conceptual space of the text is found on the overlapping plane that creates a unique literary world.

3. Research Methodology

The article is **aimed** at investigating the egocentricity of Denise Levertov's poetic texts within the thematic line (hereafter – ThL) of war. The **material** selected reflects the feminine voice of the modern poetry in the time of wars, conflicts and growing concerns. The **methods** applied to the investigation follow the major principles of liguopoetic analysis to provide the results validity. According to G. Steen's metaphor identification method (*Steen, 2001; 2011*), the egocentric propositions are selected and analyzed. With the help of V. H. Nikonova's conceptual network modeling (*Nikonova, 2008; Nikonova, Boyko, 2018*), ThL are being differentiated. Quantitative analysis is implemented in order to juxtapose the amount of ego-marked propositions compared to the neutral ones. The obtained results demonstrate the egocentricity focus within the identified ThL.

4. Historical and cultural contexts

Denise Levertov is one of the brightest figures of the modern American female poetry who represents the "political" voice of the time. The message sent in her poetic works reflects the external and personal: Denise emerges deeply into the political turmoil of Vietnam War that echoes in her poetry. Denise's life, complicated, intense and lush, finds its reflection in poetry as a step to self-reflection in the world of wars, hypocrisy and deception.

Denise comes from the modest social background of Jewish emigrant Paul Levertov and Welsh-born Beatrice Spooner-Jones. Her father adopted Christianity that, according to Denise's memories, formed her personality. "His fervor and eloquence as a preacher were factors built into my cells" (*Levertov (2)*) – she would write in her autobiographical memories. Thus, the ThL of divine in her poetic texts unveils the depths of religious self-reflection in search of self-identification.

Social and political activity of D. Levertov has modeled her creativity. Having experienced the agony of war (Levertov was a nurse during the Second World War), Denise could not stay on the sidelines of Vietnam War. In 1965 she initiated the protests of art community against this war. The ThL of life and death, framed in the context of the "far from the States War", accumulated in the literary concept of tolerance – the indication of social indifference.

Written in the traditional manner, the first poetic endeavors of a young poet did not bring the house down. Marriage to a writer M. Goodman and emigration to the USA (1948) determined Levertov's artistic future. The impact of "Black Mountain" college poets formed that one-of-a-kind Denise.

The thematic domain of self-reflection in the conceptual space of poetic texts anchors in Levertov's constant desire of self-improvement: Levertov learns and teaches a lot. Her creativity incorporates into life – socially and politically active, Denise works as an editor of the poetic department in the "Nation" Magazine, teaches in several universities (Brandeis University, MIT, Tufts University, Stanford University, University of Washington). Artistic endeavor becomes Levertov's life – real, painful, sharp, and obscure. Dubious and equivocal Levertov's poetry evaluation is another proof of a constant development of the author in search of real self in the world of absurdity, contradiction and indifference. But, without a doubt, stereotype-free, open to new, compassionate and sincere, Levertov has become the female voice of the American nation in the period of military conflicts and fight for freedom of choice and self-reflection.

According to Levertov (*Levertov (1): 2*), the author of today cannot be free from the world where he/she lives: not only artistic dexterity, but political and social realities of the time should be mastered to the full.

5. Conceptual space of Denise Levertov's poetry

Egocentric metaphorical contexts of Levertov's poetry are represented by the ThL of self-reflection, divine, life, war and love. The highest percent of textual verbalization belongs to the self-reflection ThL (38,5 %), whereas the line of love unveils in 9 % of egocentric contexts only. Although it were political and social proactive attitude and commitment appealing to involving compassion that celebrated Levertov, the political topic of war in her poetic texts uncovers itself mostly outside the ego-marked conceptual space: "*When peaceful clouds were reflected in the paddies / and the water buffalo stepped surely along terraces, / maybe fathers told their sons old tales. / When bombs smashed those mirrors / there was time only to scream*" (Levertov (1): 88). The ThL of war explicates the motives of searching those responsible for the blood on the hands of "our" soldiers in the "far-away" war.

The outstanding characteristic of egocentricity conceptualization in modern American female poetry is openness to self-reflection manifestation: it means that Levertov is not hiding the self-identification questions, but on the contrary, speaking openly about her role in the family, society and future of the mankind (Gupta, 2000: 7–8): "*Well, I would like to make, / thinking some line still taut between me and them, / poems direct as what the birds said, / hard as a floor, sound as a bench, / mysterious as the silence when the tailor / would pause with his needle in the air*" (Levertov (1): 33). It is worth pointing that Levertov's self-reflection rests upon the concept of Higher Reason, represented by God – undeniable truth. Levertov's divine is a reasonable enlightenment of soul and mind. In the poetic texts of the author, God is represented not in the role of savior and defender, but of the tailor who offers help in choosing the life colors: "*All these He will swiftly lead / to the Paradise road: they are safe*" (Levertov (1): 32).

The egocentricity actualization in Levertov's poetic texts is embodied in the source domain of container concept through such textual verbalizations: "house", "tower", "well", "castle" etc. Denise, for example, views herself as a container of memories ("house" – "*The old steps live / only in me: / me feet and thighs / remember them, and my hands / still feel their splinters*") (Levertov (1): 8), hope ("tower" – "*let in the light that answers your desire / awakening at midnight with the fire, / until its magic burns the wavering sea / and flames caress the windows of your tower*"), disillusion and frustration ("well" – "*At sixteen I believed the moonlight / could change me if it would. / ... / It was on dark nights of deep sleep / that I dreamed the most, sunk in the well, / and woke rested, and if not beautiful, / filled with some other power*") (Levertov (1): 76).

The poetic egocentricity accumulates in the image of a castle: the verse "Psalm Concerning the Castle" (Levertov (1): 53) combines the most important for Denise life guidelines – self-reflection through religion in search of harmony in life: "*Let me be at the place of the castle. / Let the castle be within me. / ... / Let the columns uphold / the roof, let the storeys uphold the columns, let there / be a dark space below the lowest floor, let the castle rise / foursquare out of the moat, let the moat be a ring and / the water deep, let the guardians guard it, let there be / wide lands around it, let that country where it stands be / within me, let me be where it is*" (Levertov (1): 53).

On the other hand, we may observe scruple of hesitance that shows the author's uncertainty in herself and this world: "*and in the pleasure of that communion / I lose track, / the moon I watch goes down, the / tide swings you away before / I know I'm / alone again long since, / mud sucking at gray and black / timbers of me, / a light growth of green dreams drying*" (Levertov (1): 41); "*If humans could be / that intensely whole, undistracted, unhurried, / swift from*

sheer / unswerving impetus! If we could blossom / out of ourselves, giving / nothing imperfect, withholding nothing!" (Levertov (1): 70).

The self-reflection climax point sounds in the next lines: "*When I found the door / I found the vine leaves / ... / ... next time / I'll move like cautious sunlight, open / by fractions, eavesdrop / peacefully" (Levertov (1): 15).* In such a way the author follows a sun-ray (*Tresidder, 1999: 348–349*), trying to escape from the container of limitations by carefully and peacefully lightening the way to harmony. The poetic reflections on the woman's role in the family, society and politics build up the main motive in the egocentricity conceptual plane. Levertov stresses upon the equality of all in all life spheres, accumulating the strength of invincible female voice: "*Yet I was not afraid, only / deeply alert" (Levertov (1): 9).*

The greatest joy of life for Denise is the joy of enlightenment: the process of growing – like a child who masters basic skills, receives education, embarks on independent life – resembles the spiritual development. Religious enlightenment is not an instantaneous insight into the wisdom of life, it is a long way of self-education and self-improvement in the Truth pursuit: "*While we eat we think, / as we think an undercurrent / of dream runs through us / faster than thought / towards recognition. / Call the child to eat, send him off, his moth / tasting of tooth-paste, to go down / into the ground, into a roaring train / and to school. / ... / Follow down the stairs at a clatter / to give them to him and save / his clear sight. / Cold air / comes in at the street door" (Levertov (1): 43); "That's it, / that's joy, it's always / a recognition, the known / appearing fully itself, and / more itself than one knew" (Levertov (1): 42).*

The egocentricity actualization in the thematic domain of life uncovers life as a dangerous conscious journey to death. In this conceptual space, a person is viewed as being *sensible* by contrast with *sensitive*. Though viewed as a moment, life is ascribed the qualities of the most precious moment, bestowing joy and light. "*You know, I'm telling you, what I love best / is life. I love life! Even if I ever get / to be old and wheezy – or limp! You know? / Limping along? – I'd still ...'" (Levertov (1): 26).*

In the thematic domain of life, we trace the egocentricity actualization in the plane of reflection and self-reflection. In the context of divine, light and joy of life become possible only through the insight into the uniqueness of its moment: "*nevertheless / I see for a moment / that's not it: it is / the First Things. / Word after word / floats through the glass. / Towards me" (Levertov (1): 54).* The joy of life is verbalized with the lexical units that characterize its fulfillment and depth. Life is the happiness of work, communication, creativity, struggle, and love – of everything that creates this unique moment: "*'Life after life after life goes by / without poetry, / without seemliness, / without love" (Levertov (1): 72).*

In the ThL of war the central place belongs to the concept death – the embodiment of all the pain and inevitability of escape. Worth highlighting that this ThL is uncovered in the comparatively small number of ego-marked contexts. Mostly the contexts of the ThL of war unveil author's political and social position regarding the USA and American people role in unleashing the war in Vietnam. Non-conventional for this ThL literary concept tolerance accumulates all indifference and negligence of the society. War embodies not only the darkness of death it bears, but the darkness of intelligence, which, covered by tolerance, is nothing but inhumanity: "*I don't care / if I never taste your fine food again, / neutral fellows, seers of every side. / ... / I would not want / a drop of your blood in me, it is pumped / by weak hearts, perfect pulses that never / falter: irresponsible to nightmare reality" (Levertov (1): 28).*

The war for the usual American becomes nothing but the line in the news. In her poems, Levertov, appealing for compassion and empathy, stresses that behind every symbol – could that be the number of a soldier or the quantity of the dead – there is a human. In the poem "News

Report, September 1991: *US BURIED IRAQI SOLDIERS ALIVE IN GULF WAR*" the topic of the human indifference is uncovered:

*What you saw was a
Bunch of trenches with
Arms sticking out.'*

...
*'A bunch of
Trenches. People's
Arms and things
Sticking out.'
'Cost-effective.' (Levertov (1): 46)*

People ("people's arms") – are just «things» viewed in the context of their effectiveness in military use. The way out from this cruel darkness Levertov saw in the empathy manifestation to which she appealed in her poetic texts.

The conceptualization in terms of war is woven into all other ThL of Levertov's poetry. As the result, the nuclei concepts of her poetry are death, darkness, blindness, indifference and blood. The distribution of the other concepts is illustrated below (Ill. 1):



Ill. 1. Conceptual space of Denise Levertov's poetry

The distribution of literary concepts in the egocentricity space of Levertov's poetry shows the nuclear position of death-related concepts. The periphery of the space is occupied by the concepts related to nature, life, self-perception and other.

The **results** of the research prove the dominant position of war ThL in the general scope of Levertov's poetry, however, ego-marked contexts of this ThL are not numerous. This might speak for the conscious or subconscious author's intention to draw this line out of the ego-marked conceptual space. On the one hand, we talk of the possible personal escape from the disasters of war. On the other hand, such thematic distribution within ego-related contexts may be viewed as an appeal to humanity not to stay aside from the ordeal of war.

6. Conclusions

The results obtained within the research show that the poetic egocentricity of Denise Levertov is concentrated on the ThL of life, divine and self-reflection, whereas the ThL of war appears to be on the thematic periphery. Known for her strong political and social position against the US military invasion and actions in Vietnam, the author develops this topic in relatively scarce amount of contexts within the ego-marked plane. Such author's position may reflect the personal escape from the military issues or, on the contrary, be the appeal to the society not to remain indifferent.

The perspectives for the further egocentricity research may include the involvement of other authors' poetic texts into the investigation. Furthermore, the issue can cover various research egocentricity aspects, such as social, cultural, gender, etc. The obtained results may contribute to the general linguopoetic research in the poetic egocentricity sphere.

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COERCIVENESS AS AN INHERENT FEATURE OF JUDGE'S DISCOURSE (LINGUISTIC ASPECT)

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Summary

This study sheds light on the judge's discourse from the point of coerciveness. In the course of a trial, a judge forms a pattern of discursive behaviour. This pattern is fundamentally different from the patterns of discursive behaviour of other litigants. This is possible, because inter alia, the implementation of discursive behaviour is carried out with the help of specific linguistic means. Their choice is determined by the judge's pragmatic orientation for the optimal achievement of the goal in the context of social interaction. Thus, all of the above suggests that the functions performed by the discursive personality of the judge, who manifests power to exercise control over the judicial process, determine the specificity of judge's discourse as coercive.

This piece of research has theoretical and practical value. We can stress the importance of the value of our paper in its original analysis of the speech behaviour of such discursive personalities as judge as well as analysis of the judge's discourse as a coercive type.

Keywords: judge's discourse, coercion, discursive personality, manifest power, meta-communitive, communicative specificity.

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1. Introduction

In different historical periods, the problem of violence has been viewed from different positions. But, as a rule, it is the problem of violence and the state, the role of the state in the implementation of violence, the justification for the use of violence. Power is realised in the discourse: «...produces things, it induces pleasure, forms knowledge, produces discourse» (Foucault, 2002, 120). The philosopher compared the process of exercising power to the process of worship, to the game, to discourse as a practice, which is also subject to certain rules, in connection with which he is interested in techniques of managing people, namely the management of their behavior (Foucault, 1984, 197).

The judge's discourse, as a particular ritualised form of power to establish the truth, combines methods of observation, qualification, classification, and punishment as a demonstration of power. Using his authority, the judge makes distinctions and passes final judgment: «...establishes over individuals a visibility through which one differentiates them and judges them» (Foucault, 1984, 197).

In the course of the judicial process, the judge constructs a model of his discursive behavior, where he uses the strategy of pressure, expressed in specific linguistic means, aimed at the optimal achievement of the goal in the conditions of social interaction. However, we did not encounter any studies devoted to the problem of coerciveness in judicial discourse in the course of the work on the article, which determined the **relevance** of the research.

Thus, the **aim** of the paper is to establish linguistic features of coerciveness in modern Anglophone court discourse.

In order to achieve this goal, the following **objectives** are to be solved:

- 1) to clarify the terminological apparatus involved in the article;
- 2) to describe the communicative specificity of judge's discourse;
- 3) to establish the language means expressing coerciveness in Anglophone court discourse.

The aim, objectives and specificity of the material determined the choice of **methods** of analysis. So, during the process of investigation, the following research methods have been used: linguistic observation and analysis as well as cognitive method, pragmatic analysis method, critical discourse analysis method. In the first place, we'd like to emphasise the method of discourse analysis as it helps to investigate the language not merely as a way to convey meaning of words, but a way of achieving a certain effect.

In our choice of the methods of the analysis we were guided by the contemporary scientific paradigms: cognitive linguistics, pragmatic linguistics, speech communication theory, lexico-semantic analysis methods. Elements of cognitive analysis helped to identify the dependence of court discourse on social conditions.

To carry out our research, we selected and described the authentic language material.

2. The notion of coerciveness

The ancient Chinese statesman Shang Yang in the 4th century B.C. wrote the study «The Book of the Ruler of Shan State», where he linked violence as punishment and virtue: «Punishment begets strength, strength begets might, might begets greatness, which inspires awe, and greatness, which inspires awe, begets virtue. So virtue has its origin in punishment» (*Shan, 1973*).

The views of Thomas Aquinas are also interesting. He considers man a rational, moral and collective being who, however, «...cannot provide for himself the necessities of life if left alone...», so the power of the state in the person of the king is seen as a good, as a phenomenon of the divine order. The law, as Thomas Aquinas interprets it, must use «force and fear» to restrain those who was «found to be depraved, and prone to vice, and not easily amenable to words». So that they refrain from evil deeds, and leave others alone: «desist from evil-doing, and leave others in peace», and that this behavior becomes «habituated in this way» (*Aquinas, 1920*).

Immanuel Kant, in «The Doctrine of Law», views violence/coercion as a dual phenomenon: both restraining human freedom and promoting human freedom, since violence in the form of law prevents the rights of some citizens from being violated by others. Only such violence can be justified.

J. Mill (1988) believed that people must obey laws for the good of society, but that compliance with the law could only be achieved through despotic rule. In addition to restrictions imposed by the state, according to his conception, there should be restrictions by civil institutions.

The development of law and legal institutions and the development of analytical approaches to philosophy provided philosophers and legal theorists with an opportunity to define the concept of coercion in more depth. It is impossible not to pay attention in this regard to H. Kelsen's study «The Pure Doctrine of Law» (1934), where he separates jurisprudence from philosophy of justice, sociology and politics, axiological problems: «Jurisprudence is completely uncritically mixed up with psychology and sociology, ethics and political

theory» (Kelsen, 2015, 10). The key characteristic of law is its coercion. Here is a quote: «Its hallmark is the use of coercion; this means that the act envisaged by the order as a consequence of a socially harmful action must be carried out also against the will of its recipient, and in case of resistance on his part, also with the use of physical force» (Kelsen 2015, 50). Law therefore cannot exist without power, as it is «a specific order of power or organisation of power» (Kelsen, 2015, 325).

Michel Foucault does not limit the phenomenon of power to the state and state authorities. He views the phenomenon of power as a multidimensional and multi-dimensional phenomenon, existing everywhere and inherent in everything – army, courts, politicians, family, noting that each of the institutions uses different mechanisms, technologies and methods of exercising power: «power relations are entangled in other types of relations (productive, marital, familial, and sexual), where they play both a determining and conditional role...» (Foucault, 2002, 313). In other words, «Power is everywhere not because it embraces everything, but because it emanates from everywhere» (Foucault, 1996, 193). In the same work, he defines power and understands it as «a plurality of relations of power... power is to be understood as the strategies within which these relations of power achieve their efficacy...» (Foucault, 1996, 191-192). Like any game, power is a confrontation: «...the relationship of power may become a confrontation between two adversaries...» (Foucault, 2002, 347). Whereby, speakers are assigned certain roles as well as certain rules are set.

Another contemporary researcher, Philip Pettit, also mentions the controlling role of discourse (discursive control). However, he views the problem of power from a different perspective – freedom as the absence of any kind of domination. To achieve this, and to strike a balance between power and human rights, he suggests that discursive control through persuasion. «It is only by means of international debate, grounded in the acceptance of certain common reasons, that states can hope to establish where, as in such cases, they may be harming one another and where the limits should naturally be set to the freedom as nondomination...» (Pettit, 2010, 85). Discursive control is about having the ability to engage in discussion and the ability to persuade.

Thus, the study of discourse is to some extent aimed at revealing the mechanisms of controlling the behaviour of actors, so by referring to judicial discourse as coercive, we mean identifying how the agent performing the role of coercive agent manifests itself in communicative forms.

3. Communicative specificity of judge's discourse

When dealing with court documents, we have noticed that the judge's discourse is fundamentally different from the lawyer's discourse and the discourse of the prosecution. However, what accounts for its difference. We hypothesise that the discursive role of the judge in judicial discourse determines the uniqueness of judicial discourse, thereby establishing its distinctive characteristics. As we see it, it is the functions performed by the discursive person (the so-called discursive role – our term) that differentiates the judge's discourse from other types of judicial discourse. To substantiate our point of view, let us turn to a brief characterisation of the concepts of «meta-communication» and «meta-meta-communication» in the context of trial.

Linguistics defines metacommunication as communication about communication. Here is an interesting quote: «it is communication about how communication is organised and proceeds, it is text about text, discourse about discourse, utterance about utterance» (Formanovskaya, 2012, 146). V. Devkin views metacommunication as «the service sphere of communication»: «When what is spoken about refers to the «service» sphere of communication,

to the way the conversation is conducted and the extent to which it ensures mutual understanding, we are dealing with what is called metacommunication» (*Devkin, 1981, 84*).

In the context of court with its ritualism and ceremonialism, the communicative process is transformed. Thus, W. O'Barr, analysing the speech behaviour of actors in court, writes that «It is common knowledge that how something is said may be more important than what is actually said» (*O'Barr, 1982, 1*). In other words, the transfer of an utterance often takes precedence over the content of the utterance.

Thus, litigants have to reflect and observe not only the verbal component of communication, but also the way it is presented, which affects the communicative relationship between litigants, who must receive information, sound out information, react to information, interpret information, focus on information and influence through information as a result. In the process of communication not only the transmission and control of information takes place, but also the influence with the information, which gives grounds to treat as meta-communicative the discourse of the defence and the discourse of the prosecution. In distinguishing judge's discourse, we proceeded from the fact that the judge receives already interpreted information from lawyers, the prosecutor, witnesses, experts, the plaintiff, the defendant. Significantly, facts of reality (communication) are so «loaded» with interpretation (metacommunication) that the original meaning is lost: «That is, the actual message (the communication) being conveyed is overwhelmed by the metacommunication, so that the original meaning is lost» (*Metz, 2017*). Emphasis should be placed on the fact that specialists professionally process the information a judge receives. In this complex area of information, the judge must orientate himself or herself, that is, to separate true facts from artificially transformed facts and to make a decision. In addition, the function of the judge is also to control the whole process, positioning himself as a representative of the authority empowered by the state to administer justice.

Finally, it cannot be omitted to mention that the judge also gives a valedictory speech to the jury, if they are present at the trial, in order for them to reach a verdict according to his instructions. In this case, we are talking about meta-communication. We should stress here that the jury must know what the judge thinks about the information presented before assessing it properly. As the lawyers' and prosecutor's interpretations (metacommunication) are often not sufficient for them to reach a verdict, what opinion the judge has about the arguments of the defence and prosecution, their actions in the courtroom, when he accepts or rejects the lawyer's and prosecutor's motions. «But to many people, the metacommunication isn't enough. They want to know the meta-metacommunication first. That is, they want to know what other people think of the person who delivered the message before giving the message its due» (*Metz, 2017*). For example, a misunderstood judge's message for various reasons – lack of authority, loss of control over the trial – can lead to a nullifying jury verdict and vice versa.

The discursive role of the judge in judicial discourse involves the following functions:

- 1) creating an authoritative image of the judge to organise an effective communication process;
- 2) regulating the communication process in order to obtain full information from the interactants of the judicial process;
- 3) stimulating the communication process in the courtroom in order to obtain full information from the interactants of the judicial process;
- 4) ensuring alteration, i.e. changing the speaker and the listener to ensure the adversarial principle;
- 5) exercising message comprehension control and feedback to avoid communicative failure;

- 6) presenting one's point of view to focus the jury's attention
- 7) formulating the judgment in such a way as to exclude the possibility of its further challenge.

Thus, all of the above suggests that the functions performed by the discursive personality of the judge, who manifests power to exercise control over the legal proceedings, determine the specificity of judge's discourse as a coercive one and classify it as a meta-meta-communicative discourse.

4. Linguistic means expressing coerciveness in judge's discourse

The examples given below are taken from case 14 – 185 of 2014, which was heard by the US Supreme Court (*Supreme Court, 14 – 185*).

Thus, only the judge has the right to ask questions in court to any participant:

JUSTICE KENNEDY: Can you explain why...? But why that is not a crime involving moral turpitude? ...why did the Fifth Circuit treat this, therefore, as a – as it requested review the sua sponte extension granted below? Why? Why would one that?

JUSTICE GINSBURG: Would the Fifth Circuit, with this rulemaking, you can't tell us what it is at this stage, this early stage, would it be available, will they have a rule should we remand this case to the Fifth Circuit?

CHIEF JUSTICE ROBERTS: Where... where is Mr. Mata at this point? (Supreme Court, 14 – 185).

The judge, as the dominant discursive person, is able to make jokes in the courtroom, while other participants are limited in this regard. Moreover, jokes on their part are not considered appropriate. Here are some examples from the case cited:

JUSTICE KENNEDY: You know the way to our hearts. (Laughter.)

JUSTICE KAGAN: He's definitely Justice Scalia. (Laughter.)

JUSTICE KAGAN: And we're not often confused. (Laughter.)

JUSTICE SCALIA: It's a good question, though. (Laughter.) (Supreme Court, 14 – 185).

Judges may use expressive language:

*JUSTICE GINSBURG: Can you explain why **on the surface**, he beats up his girlfriend (Supreme Court, 14 – 185).*

The judge may re-question (1), clarify (2) and even interrupt (3):

(1) *JUSTICE SOTOMAYOR: **Now, I've – I've forgotten**, but is there a circuit split on that third on the sua sponte review?;*

JUSTICE KAGAN: I'm sorry, but there would be an NPR when? Late this calendar year?

(2) *JUSTICE GINSBURG: **What if ...;***

*JUSTICE KAGAN: And Mr. Yang, **could you point me to the place** in the board's decision that you think makes clear what the board was doing?;*

*JUSTICE KAGAN: So on that assumption, that would, as I understand it, give the Fifth Circuit something new to think about in – in addressing this question; **is that right?***

(3) *MR. FLEMING: **It's ...***

*JUSTICE SCALIA: **Why... why would it have done that if it – if it thought that, in fact, there was some argument;***

*MR. FLEMING: **The ...***

*JUSTICE SCALIA: **I thought all it did was...;***

*MR. FLEMING: Now, because **they have not ...***

JUSTICE SCALIA: Which means there... there's no equitable tolling (Supreme Court, 14 – 185).

All the above give grounds to assert that judge's speech is powerful one. It is characterised by the use of legal language as a tool to control, regulate, impose obligations and pass judgement: «...law uses its language as an instrument, through which people are ruled, regulated, obligated, and judged» (O'Barr, 1982, 25).

5. Conclusions

In the course of a trial, a judge forms a pattern of discursive behaviour. This pattern is fundamentally different from the patterns of discursive behaviour of other litigants. The implementation of discursive behaviour is carried out with the help of specific linguistic means. Their choice is determined by the judge's pragmatic orientation for the optimal achievement of the goal in the context of social interaction.

The judge's discourse, as a special ritualised form of power to establish the truth, combines methods of observation, qualification, classification, punishment as a demonstration of power. Using his or her authority, the judge makes distinctions and renders a final judgment. Thus, all of the above suggests that the functions performed by the discursive personality of the judge, who manifests power to exercise control over the judicial process, determine the specificity of judge's discourse as coercive.

This piece of research has theoretical and practical value. We can stress the importance of the value of our paper in its original analysis of the speech behaviour of such discursive personalities as judge as well as analysis of the judge's discourse as a coercive type.

The practical value of the paper is in providing the possibility of using its provisions and conclusions, the factual material in the study of communicative science, psycholinguistics, discourse analysis, in the practice of translation, linguistics and area studies, in the course of legal writing, oratory.

It is worthwhile to bear in mind that for reasons of scope of the article, we were not able to fully cover all the issues of interest related to the manifestation of coerciveness in speech behaviour of a judge. Therefore, we would like to note that the study is **promising** in terms of dealing with such issues as manifestation of coerciveness in speeches of other litigants, e.g. defendants, witnesses, experts.

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INNOVATION, WORK, SOCIETY

DEVELOPMENT OF BLOCKCHAIN TECHNOLOGY FOR EFFECTIVE INTERACTION OF CIVIL SOCIETY AND STATE

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Summary

The prospects of development civil society and the rule of law in EU and Ukraine are based on the thesis of “autonomous person”. Free economic entity – endowed with economic rights and freedoms, including the right of private property, the right to choose forms and types of employment and business activity. Blockchain technology is quite promising for civil society growth, considering that it can be applied to any transaction between any participant globally without intermediaries and partnerships.

Author determines the main reasons for the need for legal regulation of crypto currency and analyses the financial and legal regulation of electronic money and cryptocurrency in EU, USA and Ukraine. This made possible to analyze development of blockchain technology and to formulate benefits of its application for effective interaction of civil society and state.

The application of the historical legal method allowed studying the genesis of scientific research of cryptocurrency and development of relevant legislation in EU, USA and Ukraine. Using the formal-logical method contributed to determine the main reasons for the need of cryptocurrency’s legal regulation. In the process of an analytical review of the financial and legal regulation of the circulation of electronic money and cryptocurrency in USA, UK and Ukraine a comparative method was used, which made possible to formulate benefits of blockchain technology.

Keywords: blockchain, Bitcoin, free economic entity, cryptocurrency, electronic money.

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1. Introduction

Dialectics of relations between civil society and state are complex and contradictory, since there is a peculiar separation of organizational and managerial work between them. Civil society, as a dynamic system, is always under pressure from public authorities. It is independent insofar as the state is tolerant of such independence. On the other hand, a state cannot develop without the free formation of a civil society that controls the actions of political power and

resists the attempts of the state to usurp it. The state and society exist in the form of contradictory continuous interactions. The nature and orientation of which depend to a great extent on the level of development of civil society and its institutions. Confrontation of interests of the state and civil society is an indicator of inefficiency of the state administration and its mechanism. An optimal condition for their compromise is to establish a harmonious unification of private and public interests in order to safeguard human rights.

One of the main characteristics of civil society is the presence of structures that are created to satisfy the people's material and spiritual needs through self-organization. Civil society organizes itself, from below, and is not constructed from above by order of the state. The rapid development of society in the economy, trade and IT areas opens opportunities for new ways of interaction between civil society and state. The predicted consequence of technological progress is the appearance of unique phenomena at the intersection of the above-mentioned areas. One of the fast-growing phenomena is the emergence of cryptocurrency. And since most countries do not have legal regulation of cryptocurrency at the moment, it attracts the progressive part of society to use it without a burdensome tax mechanism and state restrictions.

Aspects of the circulation of electronic money are actively analyzed by foreign scientists, such as: A. Beger, N. Varfolomeeva, D. Vakhrushev, O. Voleviz, O. Zaitseva, A. Kvitka, E. Mack, E. Seitim Aiganim, M. Swan, etc.

Since 2017, in the Ukrainian scientific discourse, issues of legal status, financial and legal nature of cryptocurrencies receive more attention: L. Akimova, O. Balan, O. Boldachova, D. Bukovsky, M. Burdonosova, O. Danilchenko, I. Klimenko, G. Lozova, O. Strelenko.

The purpose of this article is: – to analyze development of blockchain technology and to formulate benefits of its application for effective interaction of civil society and state; – to determine the possibilities for the application of this technology on the basis of domestic and foreign scientific experience, using current legislation in EU, USA and Ukraine.

2. The occurrence of cryptocurrency in the world

In the current economic and legal space all financial transactions of individuals and legal entities are controlled by the state through taxation and fees. In addition, there is a complete monopoly of each state on the issuance of national currency. For example, the Law of Ukraine "On the National Bank of Ukraine (NBU)" confirms that the functions of NBU include the monopolistic realization of the issue of the national currency of Ukraine and the organization of cash circulation (*National Bank of Ukraine: Law of Ukraine dated May 20, 1999. No. 679-XIV. Bulletin of the Verkhovna Rada of Ukraine. No. 29. Art. 238.*). In addition, banks always mediate between parties. It is clear that this situation compels the society to look for other ways of making payments, directly between the parties of the contract without the involvement of intermediaries, which results in cheaper goods and services. The first cryptocurrency that was created on this basis was Bitcoin.

On October 31, 2008, unknown person or group of people who worked under the alias Satoshi Nakamoto released an official document describing the basics of the project. The founder, characterizing Bitcoin, notes that it is a version of electronic cash that allows making online payments that are sent directly from one side to the other without going through a financial institution (*Satoshi Nakamoto, 2008, p. 1*).

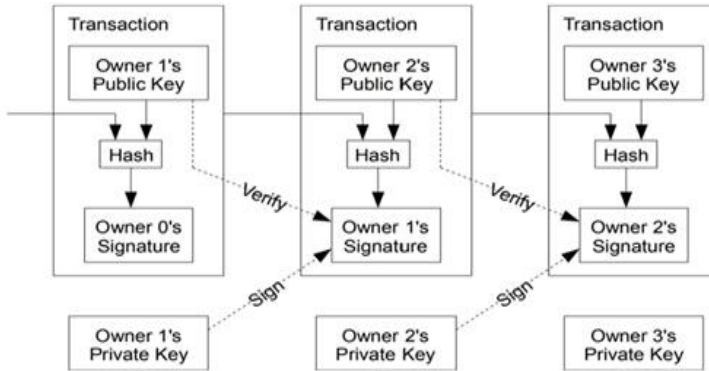


Fig. 1. Satoshi Nakamoto's transaction verification scheme.

Satoshi Nakamoto defines an electronic coin as “a chain of digital signatures”. Each owner of such coin transfers the coin to the next by digitally signing a hash of the previous transaction and the public key of the next owner. And this signature and public key is adding to the end of the coin. A recipient can verify the signatures to verify the chain of ownership (Figure 1) (*Satoshi Nakamoto, 2008, p. 2*).

In 2009, the first block in Bitcoin's blockchain was extracted (this block is called the genesis block and contains 50 Bitcoins). This is how the most influential cryptocurrency of today emerged. At the time, Bitcoin cost absolutely nothing and could be retrieved from a home PC [Schroeder S., 2018]. After Bitcoin has emerged as the first widely-deployed, decentralized global currency, hundreds of copycat currencies were sparked. Overall, cryptocurrencies have garnered much attention from the financial and tech sectors, as well as academics; achieved wide market penetration in underground economies (*Eyal I., Gencer A. E., Siner E. G., Renesse R., 2016, p. 45*).

The most important aspect of the emergence of cryptocurrency, including Bitcoin, has been the development of blockchain technology, which is considered to be the main innovation of Bitcoin, as it serves as a “trustless” mechanism for verifying all transactions.

The use of a peer-to-peer (P2P) computer network is characterized by the fact that their elements can communicate directly with each other, unlike traditional architecture, where only a single category of participants -servers, could provide certain services to others. Such a network marks transactions by transforming them into a permanent chain of evidence – proof-of-work (POW) thus preventing them from being used twice. The peculiarity of such calculations is the inequality of time spent – they are significant for finding a solution to a particular problem and very small for checking it (*Dwork C., Naor M., 1992*).

The basic novelty of blockchain lies in its architecture, which enables decentralized transactions, which do not require the establishment of a trust relationship with a transaction partner and thus do not require additional intermediaries (for example, a bank) to carry it out.

Considering the prospects of building civil society and the rule of law in EU and Ukraine, it should be mentioned that such phenomena is based on the thesis of “autonomous person”. Free economic entity – endowed with economic rights and freedoms, including the right of private property, the right to choose forms and types of employment and business activity. Autonomous person protected from state's direct interference and arbitrary restrictions. In addition, subjects of civil society are legally independent from each other; they enter

into legal relationships and interact as free and equal partners. Therefore, the use of blockchain technology is quite promising for the development of civil society, since the principle of P2P interaction (without intermediaries and partnerships, trusts, state or banks) can be applied to any kind of transactions between any participants on a global level.

However, it should be emphasized that such technologies have good prospects for use in civil society, in particular, in a society with a high level of awareness and respect for social and legal norms. As an example, we can speak of the citizens of the European Union as participants in social relations, aware of their responsibility to society, understand the value of law, order and a conflict-free existence.

But in order to fully unlock the potential of blockchain technology, it is necessary to determine the status of cryptocurrency and electronic money at the legislative level. The situation with the uncertainty of such status is inherent in most countries of the world, where there are currently quite opposite approaches to their legal regulation. Mutually exclusive thoughts can occur even in one country. An example of this is the United States of America, where Judge of the Eastern District of Texas (Case No.4:13-CV-416) decided that Bitcoin is a currency. Judge T. Mazant conceded: "...because Bitcoin can be used as money to pay for goods or to be exchanged for other currencies (dollar, yen, yuan, etc.), then Bitcoin is a currency or form of money" (*Court officially declares Bitcoin a real currency. RT.com, 2013*). In the other case Judge of Florida District Court (Case No.F14-2923) T. Pooler declared otherwise: "...Bitcoin transactions cannot be considered money transmission", which led to the removal of the charge of legalizing proceeds of crime (*Case No. F14-2923 In the Circuit Court of the eleventh Judicial Circuit in and for Miami-dade County, Florida, USA, 2016*).

In the United States, at the federal level, some cryptocurrency exchanges are required to be registered as money transfer operators on the Anti-Financial Crime Network. In addition, in each state, the activities of such companies are subject to licensing. For tax purposes, digital money is treated as property and cryptocurrency transactions are taxed. For example, the payroll paid to employees in Bitcoin is subject to federal income tax and payroll tax.

Also, UK's experience is interesting in the field of cryptocurrency regulation. In 2014, the Financial Conduct Authority confirmed that Bitcoin is neither currency nor money, so the cryptocurrency cannot in any way be governed by UK financial law. Thus, digital currency in the UK is still considered to be a unique combination of numbers resulting from complex mathematical calculations and algorithms. Therefore, Bitcoin is not covered by the UK Law on the Legalization (Laundering) of Proceeds of Crime (Money Laundering Regulations 2007). In April 2016, the Treasury's Action Plan was published to combat the legalization (laundering) of proceeds of crime and the financing of terrorism. In the document, the Treasury proposed to apply legislation in the field of legalization (laundering) of proceeds from crime against the exchange by cryptocurrency companies engaged in currency exchange. However, companies that provide cryptocurrency wallets to users but do not provide digital currency exchange services should not be subject to such legislation (*Axon Partners, 2017, p. 26-27*).

3. The current state of development of blockchain technology in Ukraine

First Ukraine government's official position on cryptocurrencies appeared in 2014, when NBU's Explanation on "virtual currency / cryptocurrency" Bitcoin use in Ukraine was stated. It considered cryptocurrency as a non-cash surrogate that has the provision of real value. The use of which, as a means of payment, by individuals and legal persons in Ukraine is prohibited, in accordance with Part 2, Article 32 of the Law "On the National Bank of Ukraine" (*National*

Bank of Ukraine: Law of Ukraine dated May 20, 1999. No. 679-XIV. Bulletin of the Verkhovna Rada of Ukraine. No. 29. Art. 238; Clarification on the lawful use of “virtual currency / cryptocurrency” in Ukraine Bitcoin, The National Bank of Ukraine: an official Internet representation, 2014.) This explanation was canceled in 2018 (*On the recognition of the outdated individual letters of the National Bank of Ukraine, Letter of the National Bank of Ukraine from 22.03.2018 p. No 40-0006/16290*).

In order to clarify the legal nature of Bitcoin, it is important to note that the Law on the NBU stipulates that a monetary surrogate “is any documents in the form of banknotes that are different from the official currency of Ukraine”. Monetary surrogate not issued by the NBU and made for the purpose of making payments in trade. Further analysis shows that the signs of cryptocurrency do not fall within the concept of “document” or even “electronic document», where information should be recorded in the form of electronic data, taking into account the required details of the document. Thus, it is wrong to refer the cryptocurrency to the monetary surrogates, since it has other defining features (*Burdonosova M., 2019, p. 10*).

The aforementioned explanation of the NBU drew attention to the need of determine the status of cryptocurrency in Ukraine and initiated wide discussions with the involvement of representatives of various spheres of economy and business. Bitcoin Foundation Ukraine, KUNA Bitcoin Agency, the Bitcoin Embassy and NBU activated discussions and development of the Bitcoin project in Ukraine.

As a result of two-year cooperation, on October 10, 2016, the NBU approved the Cashless Economy roadmap, which first outlined the regulator's official plans for the use of Blockchain technology in Ukraine. Accordingly, in the framework of the development of the National payment system “PROSTIR” (before rebranding it was known as National System of Mass Electronic Payments “NSMEP”) will be the “evolution of e-money” as a cashless payment instrument. It will base on Blockchain technology and the issuer will be NBU. This will cause the effect of “cheap acquiring” as an alternative to card payments. In December 2016, the Ukrainian Stock Exchange became the world's first marketplace for cryptocurrency derivatives (*Axon Partners, 2017, p. 87-90*).

In 2018, Ukraine entered the TOP-10 countries by the number of Bitcoin users. There operates biggest in the CIS Bitcoin agency “Kuna” with its cryptocurrency exchange (market). There are also large development and research companies, such as Distributed Lab (*BRDO, 2018*).

In 2018, the official statement was made by the Secretary of the National Security and Defense Council of Ukraine. During the meeting of the National Cyber Security Coordination Center, it was noted that the development of the cryptocurrency market cannot be ignored by the state. The main results of testing for cyber-vulnerability of information and telecommunication systems of public authorities were considered. Nowadays in many countries the lack of external and internal control over the circulation of cryptocurrency and anonymity of settlements creates potential prerequisites for their use in order to legalize money obtained through crime, drugs and weapons, makes it possible to finance terrorism. The further removal of the state from this issue and the legal vacuum in the cryptocurrency market due to the lack of legislative and regulatory framework “creates threats to the economy and security of the state”.

In addition, it has been mandated to develop a mechanism for ensuring access by law enforcement agencies to cryptocurrency exchange data on a reasoned request. The development and implementation of all these measures will also involve the development of international cooperation for the implementation of integrated regulation of cryptocurrency circulation and avoiding criminalization of this segment (*Turchynov O., 2018*).

The need for legal regulation of cryptocurrency today is caused by the following problems that have recently emerged in practice:

1) The lack of proper regulation prevents single tax payers from accepting payments directly in cryptocurrency, however, for value added tax payers, cryptocurrency transactions are subject to VAT. Regulation of this situation will positively affect the growth of the number of cryptocurrencies' users. Clear and understandable taxation could attract potential users and reduce the possibility of developing fraudulent virtual asset taxation schemes.

2) The lack of clarification of the investigated term in the current legislation creates space for abuse and change of concepts even for law enforcement agencies and participants of the cryptocurrency market. Otherwise, properly regulated and favorable conditions for the participants (miners, buyers) could obtain additional taxation to fill the state budget. The definition of cryptocurrency as an asset that has monetary value would enable its holders to protect their property rights for cryptocurrency in court.

3) Controversial issues regarding the attribution of cryptocurrency to either the property right or the payment instrument. For state regulation, it is easier to consider it as a financial asset and give the following characteristics: – program code as a decentralized digital value measurement; – an object of ownership that may serve as a means of exchange. However, market participants use cryptocurrency primarily as a means of payment. Since its main difference from the usual national currency is decentralization and government control. The fact of the emergence of this independent, with no control center, digital payment system demonstrates that the level of citizen's trust in the state and in the financial system worldwide is falling.

According to Balan. O., Bukovsky D. the main directions of using blockchain technology in the public sphere can be:

- Public administration. Blockchain technology allows transferring all state data stored electronically to the blockchain platform as well as all state services.
- Health care. By its principle, blockchain is ideally suited to creating a unified registry of patient cards as well as tracking medication supplies.
- Higher education – for storing certificates and diplomas using blockchain.
- Agrarian sector – to maintain an animal identification register.
- Libraries and archives – to transfer all information into electronic form using blockchain technology.
- Retention of property rights.
- Law enforcement agencies – to create a single base of offenders.
- Fiscal service – creation of a unified database for accounting of taxpayers.
- Social services – creation of a unified base of persons in need of social (outside) assistance.
- Banks – creation of a single customer base.
- Infrastructure – creation of a single register of passenger and freight traffic; creation of a unified base of infrastructure investment projects.
- Election system – blockchain technology can be used in elections and referendums (Balan O. S., Bukovsky D. A., 2018, p. 7).

As the cryptocurrency community is quite active in EU and in Ukraine, the aforementioned areas have real prospects for their implementation on the basis of decentralized blockchain technology. In addition, at the state level, such systems as: e-Auction 3.0, e-Vox, E-Ukraine are already partially implemented. In February 2016, a group of volunteers signed a memorandum of creation of E-vox, an electronic voting system based on the Ethereum blockchain. E-vox is a system that allows voting at any level, including the election of deputies to

local councils, parliament. Also, the system can hold electronic referendums, current voting on any issues, etc.

In March 2016, a memorandum was signed to launch the Blockchain e-Auction 3.0 platform – a system of decentralized online auctions in government agencies at the municipal and regional levels. e-Auction should be the world's first example of using a decentralized horizontal system for privatization and leasing of state property and licensing. Also, in March 2016 at the Blockchain Conference Kiev was presented the concept of e-government portal e-Ukraine. The system is based on Blockchain technology, and ultimately the platform should be the basis for interaction between citizens, business and the state (*Axon Partners, 2017, p. 89*).

On 10th of April 2018, 22 Member States of EU agreed to sign a Declaration creating the European Blockchain Partnership (EBP) and cooperate in the establishment of a European Blockchain Services Infrastructure (EBSI) that will support the delivery of cross-border digital public services, with the highest standards of security and privacy. M. Gabriel Commissioner for Digital Economy and Society stated that in the future, all public services will use blockchain technology. Blockchain is a great opportunity for Europe and its Member States to rethink their information systems, promote user confidence and protect personal data, foster new business opportunities and create new leadership areas that benefit citizens, public services and companies. The Blockchain partnership declaration was launched at the Digital Day 2018, and was signed by twenty-one EU Member States: Austria, Belgium, Bulgaria, Czech Republic, Estonia, Finland, France, Germany, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, UK. In the context of Brexit, UK is no longer an active member of the European Blockchain Partnership. Norway was also a signatory. Since then, eight more countries have joined the Partnership, bringing the total number of signatories to 30. (*European Commission. Strategy. Digital Single Market, 2018*).

One of the promising areas of application of Blockchain technology for government management is the Blockchain-government. It means using of this platform for the most efficient, cheap and personalized provision of services traditionally provided by public authorities. This could contribute to the development of many new models of interaction between the state and the population.

The blockchain government works on the basis of the technology of storing publicly available data in a distributed journal of records – a universal, permanent, consistent, continuously functioning and publicly accessible archive (*Swan M., 2018, p. 113*). Changing the format from a monopoly on administrative services to personal interaction and clarifying the needs of each individual citizen will lead to the need to build more active, more personalized relationships between government and consumer citizens, the need to offer them better services.

In 2017, the World Economic Forum conducted a survey that confirmed that in 5 years blockchain technology will be actively used in public services by the world's leading powers. The main prospects for technology implementation are to reduce operating costs (73% of respondents) and settlement time (69% of respondents), minimize risks (57% of respondents) and increase the opportunity to generate additional income (51%) (*Tapscott D., Tapscott A., 2017*).

4. Conclusions

The important consequence of cryptocurrency's appearance was the development of blockchain technology. This technology opens great opportunities for interaction of society and state. The basic novelty of blockchain lies in its architecture. It enables decentralized

transactions, which do not require the establishment of a trust relationship with a transaction partner and thus do not require additional intermediaries. Maximum benefits from blockchain technology are possible to achieve in civil society where citizens are understanding their responsibility to others, appreciate the value of law, order and a conflict-free existence. In order to fully unlock the potential of blockchain technology, it is necessary to determine the status of cryptocurrency and electronic money at the legislative level.

In civil society where citizens are understanding their responsibility to society, have some independence in relation to the state, are interested in the welfare of the state and contribute to its development, it is possible to achieve maximum benefits from blockchain technology. This can be done by the introduction, at least in part, of blockchain technology in government management.

Electronic government will reduce the number of employees in the state apparatus, and, accordingly, the amount of maintenance costs from state budget. Money saved in this way can be spent on raising the minimum wage, reinforce citizens' interest in such innovations and simplify the transition to an automated economy.

Furthermore, the main directions of using blockchain technology in the public sphere can be: elections, referendums, state services, retention of property rights, creating single base of offenders, storing educational certificates and diplomas, etc. Electronic state services will reduce the number of employees in the state apparatus and the amount of maintenance costs from state budget. Money saved in this way can be spent on raising the minimum wage. This will promote the development of interaction between civil society and state, effective involvement of the population in referendums on a variety of issues and activating a person's civic position.

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TRENDS AND FORECAST OF UKRAINIAN FOREIGN TRADE RELATIONS**Diana Kyredon**

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Summary

The paper is devoted to identifying key challenges for the Ukrainian economy related to the need to intensify foreign trade. The aim of this paper is to identify trends in foreign trade relations of Ukraine. The dynamics and main structural shifts in Ukraine's foreign trade are analyzed. The modern stage of development of world economic relations dynamism, liberalization, diversification of forms and types of foreign economic activity are characterized. In 2019-2021, in the frames of the processes of reforming Ukraine's economy, increasing the level of competitiveness and investment attractiveness, Ukraine is projected to achieve a higher level of financial globalization compared to previous years, which will have a positive impact on the balance of payments. The objective nature of asymmetries of Ukraine's foreign trade interests is revealed. Peculiarities and priority directions of development of foreign trade interests of Ukraine are determined. Methods of dialectical logic and general system principles of conducting scientific researches, fundamental provisions of economic theory, laws of functioning of market economy are used for the decision of the set tasks in the paper.

Keywords: foreign trade relations, world economy, export, balance of payments, economic interests, foreign markets, economic growth.

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1. Introduction

Trends in world trade relations determine the following chains of modification: the national economy is increasingly integrated into the internationalized reproductive links, becoming part of them and influencing the whole set of elements of the chain. The internationalization of the economy fundamentally changes the political map of the world, establishing new economic borders with their own national interests, areas of strategic goals and the scheme of integration phenomena.

International trade is an important factor in improving the efficiency of resource use, as well as a source of foreign exchange earnings to the economy. In the modern world economy, international economic relations in general, and international trade in particular, are one of the most important factors in the further development of the world economy (*Makin, 2009*). Successful realization of Ukraine's economic interests in foreign markets requires an understanding of the main processes and patterns of its development, assessment of its state and macroeconomic changes that are taking place in the world economic space and in the leading regions of the world.

The purpose of paper is to identify trends in foreign trade relations of Ukraine, which are important for economic growth of the national economy.

The structure and dynamics of foreign trade have been studied in the works of many scientists, including the works of A. Makin, A. Mazaraki, T. Melnyk, V. Heits, M. Lyzun, O. Kiselyova, I. Lishchynskyy, R. Bodnar, V. Eleika, B. Didkovska, and others. The authors of scientific works analysed the current state, identify trends in the development of foreign trade relations of Ukraine. However, despite numerous publications, the question of Ukraine's further participation in international trade remains open.

2. Analysis of Ukraine's foreign trade relations

Effective participation of Ukraine in international trade is one of the most important factors in ensuring economic growth. In 2019–2021 foreign trade relations of Ukraine will be developed under the influence of sustainable development of the world economy that will be characterized mainly by the processes of transformation of production with a focus on high technologies and innovations, diversification of economic ties, dynamics of world prices for both export and imported goods.

In the case of Ukraine's economy, it is expected not only to expand export activities and increase the contribution of external demand to the overall growth, but also to change gradually the commodity structure of exports in the direction of increasing the share of high-tech products (*Lyzun, Lishchynskyy, 2013*). Ukraine's transition to higher value-added exports, among other things, will be facilitated by further implementation of state policy priorities identified, in particular, Ukraine's Export Strategy: “Roadmap for Strategic Trade Development for 2017-2021”, which provides for a gradual increase in Ukraine's export competitiveness, intensification of investment and innovation processes, including through the activities of the Export Credit Agency (Resolution of the Cabinet of Ministers of Ukraine dated 07.02.2018 № 65 “The establishment of the Export Credit Agency”). The Export Credit Agency will insure, reinsure and provide guarantees under contracts to promote the development of export (*Kaliuzhna, 2015:83*). The agency will also participate in the implementation of partial interest rate compensation programs on export credits and provide consultations for exporters (Fig. 1).



Fig. 1. Exports of Ukraine, USD Million

Source: State Statistics Service of Ukraine

However, taking into account a certain period of time for the introduction of new technologies and bringing Ukrainian exports to a new technological level, no significant changes in the commodity structure of exports are forecast in the forecast period. A substantial part of domestic exports will still be raw materials, in particular agricultural products, the volumes of which will increase. The main export agricultural commodity will remain grain crops in the conditions of favourable price conditions and projected growth of production volumes, as well as the effect of economic and mutual trade sanctions between the Russian Federation and European countries, which will create certain competitive advantages for Ukraine.

In the context of growing external demand, the volume of foreign trade in metallurgical products will continue to increase due to the increase in physical volumes of exports, given the gradual optimization of China's metallurgical complex against a less favourable price situation in the world market in the medium term. In turn, the increase in exports of mineral products will take place in the conditions of suspension of the decline and resumption of positive dynamics of world iron ore prices at the end of the forecast period (Fig. 2).

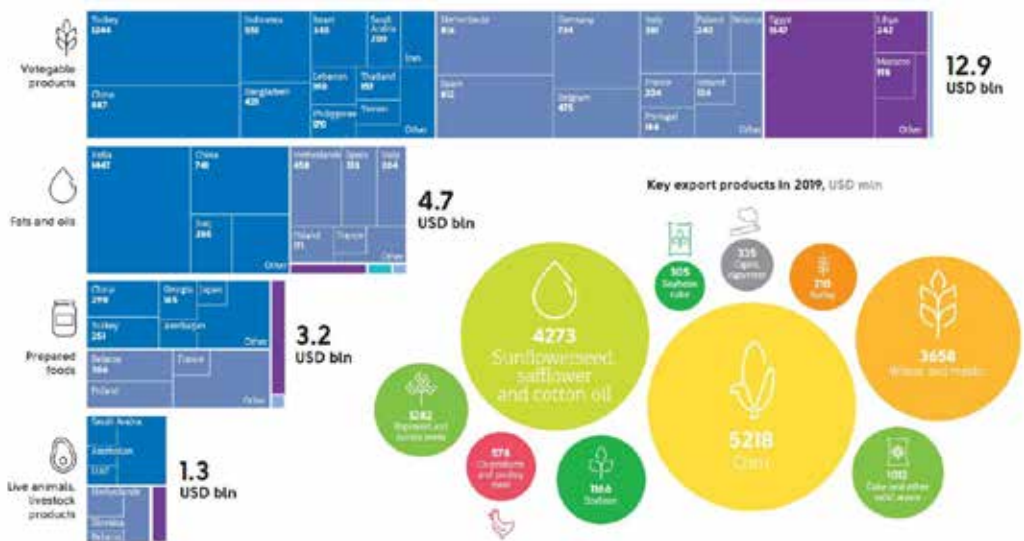


Fig. 2. Export of Ukrainian agricultural goods in 2020, USD Million

At the same time, the implementation of the Government's measures to strengthen the position of domestic exporters in world markets, increase the competitiveness of domestic products by intensifying investment and innovation processes, including modernization of production and development and production of new products, will promote non-raw materials, in particular mechanical engineering products.

In general, the share of basic low-tech goods on average in 2019-2021 is projected at about 46 percent of total exports of goods compared to 43 percent on average in 2015-2017, and high- and medium-high-tech goods – at 19 percent compared to 18 percent.

Further increase in incomes in the country and steady growth of domestic consumer demand, expansion of production capacity in the context of intensification of modernization processes, including imports of equipment, rising raw material prices will be the main factors of

growing imports in moderate devaluation processes. The restraint on imports will have a slight decrease compared to 2018 in the level of natural gas prices and the implementation of energy saving measures and increase the share of renewable energy consumption (Fig. 3).



Fig. 3. Import in Ukraine, USD Million

Source: State Statistics Service of Ukraine

Within the framework of the Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their Member States, on the other hand (hereinafter – the Agreement with the European Union), trade turnover will continue to increase. Further cooperation with the countries of the European Union will also increase imports from these countries, which will mainly supply mechanical engineering products, high-tech equipment and chemical products (*Savelyev, Kuryliak, Lyzun, Lishchynskyy, 2017*).

In the medium term, a further reduction in trade with the Russian Federation is projected. At the same time, we can expect the intensification of trade relations with Africa and Asia, including through the conclusion of a free trade agreement with Israel and Turkey, in terms of expanding and diversifying Ukraine's foreign economic relations, in the framework of Ukraine's Export Strategy. Foreign economic relations with India, China, Egypt and other countries will deepen.

Transport services will continue to account for a significant share of exports of services, the volume of which will gradually increase, in particular, in the context of Ukraine's integration into the European transport space.

Further spread of modern telecommunication developments, innovative products and introduction of the newest technologies will positively influence dynamics of services which are connected with computer and information technologies, scientific and business services. The competitiveness of the national tourism industry will increase. All this is a sign of increasing competitiveness in the latest services.

In general, the growth of exports of goods and services in 2019-2021 was projected at an average of 8.7 percent annually (in 2019 – by 8.3 percent), which is slightly higher than previously forecast (5.7 percent) due to the improvement of foreign economic conditions on average per year in 2018-2020). However, COVID-19 pandemic conditions had a negative influence on economic situation.

However, even with such dynamics, exports of goods and services in 2021 will not reach its pre-crisis level and will be 94.8 percent of the 2013 level.

The growth rate of imports of goods and services in the medium term will be formed at almost the same level as exports – 8.5 percent (in 2019 – 9.1 percent). Higher rates compared to the previous forecast (6.4 percent on average for the year 2018-2020) are due, in particular, to changes in the statistical calculation base due to the National Bank of Ukraine in early 2018 reviewing data on private remittances in 2015-2017 from using mirror statistics of individual countries. However, such dynamics will not ensure the achievement of the pre-crisis level of imports of goods and services in 2021 (91.6 percent of the 2013 level).

In the medium term, the impact of the growth factor of remittances in the conditions of high activity of migrant workers on the formation of the balance of primary incomes of Ukraine's balance of payments is projected to continue. However, in the conditions of the expected attenuation of the intensity of post-COVID migration processes, the dynamics of the respective revenues will slow down during the forecast period.

3. Balance of payments as indicator of foreign sector development in Ukraine

At the same time, during the forecast period, capital outflows will continue to be observed due to the payment of dividends and deductions from investment income, interest on long-term portfolio investments, including interest payments on IMF loans and public debt. However, this will not prevent the formation of the balance of “primary income” at a positive level.

As in previous years, and during 2019-2021, a positive balance is also expected under the item “secondary income”, which will be provided mainly by transfers of financial and non-financial corporations, as well as remittances from non-resident workers (working abroad for more than a year).

Simultaneously, “secondary revenues” will also be generated through international cooperation operations, in particular by attracting funds from the general government sector in the form of technical assistance in the framework of continued cooperation with international financial organizations and partner countries. The latter includes financing to restore the infrastructure facilities of Donetsk and Luhansk regions destroyed during the hostilities.

However, the intensity of these processes will still not allow in the medium term to generate a current account surplus, the volume of which will still be largely determined by the volume of a significant negative balance of goods and services. Under these conditions, the current account deficit during the forecast period will increase from “minus” 2.6 billion US dollars in 2019 to “minus” 4.2 billion US dollars in 2021 (Fig. 4).

In 2019-2021, in the frames of the processes of reforming Ukraine's economy, increasing the level of competitiveness and investment attractiveness, Ukraine is projected to achieve a higher level of financial globalization compared to previous years, which will have a positive impact on the balance of payments. Investment inflows into the banking and real sectors of the economy will increase due to greater attractiveness of investments in assets and currency by investors, intensification of privatization processes with subsequent implementation of large-scale investment projects. There will also be a need to expand scientific developments in the field of energy and resource-saving technologies, space and aircraft construction, military-industrial complex, which requires new investments (*Lishchynskyy, 2019*).

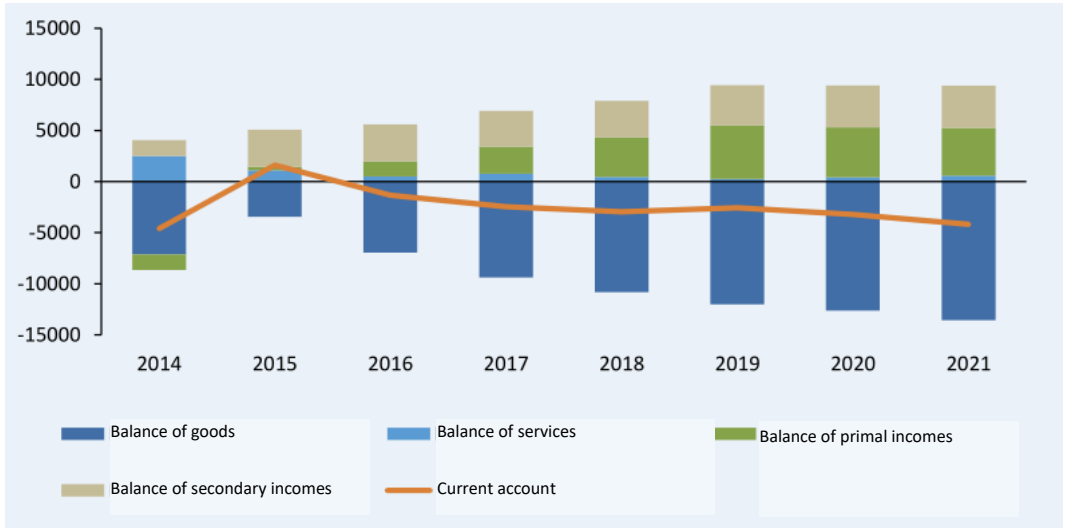


Fig. 4. Ukraine's Current Account of BP, USD Million

Source: NBU

At the same time, a decrease in the volume of cash currency outside banks is projected in the conditions of a relatively stable situation in the foreign exchange market and a steady increase in consumer demand, which will affect the state of investment and debt capital. Previously borrowed capital will be repaid, but this will not affect both long-term and short-term debt capital. Sustainable economic development within the country will ensure the attraction of cheap financial instruments and free capital of other countries (*Kulytskyi, 2018*). In 2019-2021, the net growth of foreign direct investment is projected at 5.25 billion US dollars annually (4–4.5 billion US dollars in 2019).

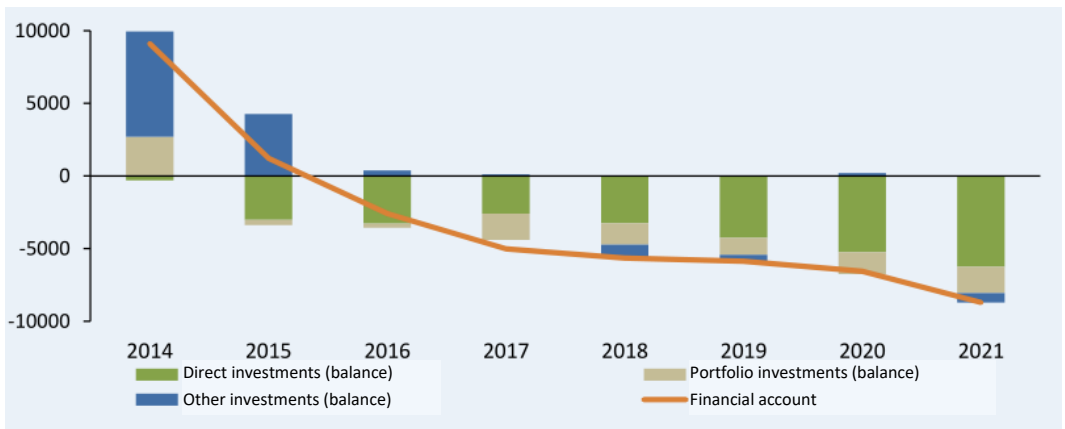


Fig. 5. Ukraine's Financial account of BP, USD Million

Source: NBU

Further implementation of new national bond placements by the Government of Ukraine is expected in the conditions of continued cooperation with the IMF, the World Bank and obtaining loans from the European Union (*P'iankova, and Ralko, 2016*). Revenues from the financial account will exceed the outflow from the current account, which will allow to increase international reserves to almost the level of about 32.2 billion US dollars by the end of 2021, which will cover 4 months of expected imports.

However, the balance of payments may be associated with risks that have arisen as a result of positive trends in recent years. This refers to the state of foreign economic relations with the EU. Ukraine, although insignificant, still enters new trade niches in Europe. Although Ukraine's trade balance with the EU remains in deficit, Ukraine's participation in the logistics and transport networks of Central and Eastern Europe should contribute to its (deficit) improvement.

Meanwhile, we will consider two more macroeconomic observations on the relationship of the most important macroeconomic indicators of Ukraine in the foreign economic sphere (with the component of FDI).

In the vast majority of cases, real GDP growth was accompanied by a positive current account balance and FDI inflows. Moreover, a significant increase in the “necessary” condition was a positive value of this amount.

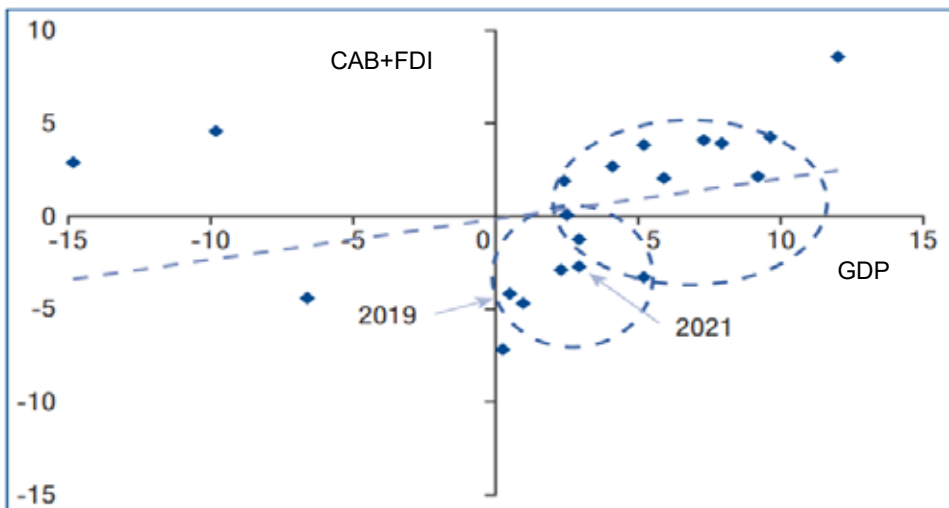


Fig. 6. Growth of real gross domestic product, as well as current account and foreign direct investment 2000-2021

There is an inverse (albeit weak) relationship between the amount of FDI and FDI and the amount of total external debt, which confirms the “normal” position that in the event of a deterioration in the balance of payments there is an increase in external debt (*Lyzun, 2017*). Thus, the increase in foreign direct investment will be an important factor in improving Ukraine's external debt (more on this).

Ensuring a high deficit of foreign trade in conditions of low inflow of foreign resources, including FDI means that Ukraine will have to actively use its own foreign exchange reserves, both for current payments and to meet external debt requirements (primarily public debt) (*Heits, Mazaraki, 2008*). It should be recalled that in the pre-crisis period, Ukraine had

virtually no problems with its external debt obligations – the level of reserves significantly exceeded the total debt of the government and the NBU. The situation has deteriorated sharply since 2012, and today only the most current external payments can be covered (and only partially) by reserves.

For 2021, the more probable scenario for the development of the situation in the social sphere, is the pessimistic scenario, this linked both to the prolonged negative effect from the pandemic's continuation and to the approaches of representatives of the current authorities to social policy. There are almost no factors capable of influencing the situation in a positive way.

4. Conclusions

1. Ukraine's foreign trade relations in 2019-2021 will be formed under the influence of sustainable development of the world economy, which will be mainly characterized by the processes of transformation of production into production of high technologies and innovations, diversification of economic ties in deepening integration foreign trade processes, dynamics of world prices for both export and imported goods.

2. In view of this, it is envisaged not only to expand export activities and increase the contribution of external demand to the overall growth of Ukraine's economy, but also a gradual change in the commodity structure of exports in the direction of increasing the share of high-tech products.

3. Ukraine's transition to the export of goods with higher added value, in particular, will contribute to the further implementation of public policy priorities identified, in particular the Export Strategy of Ukraine: Roadmap for Strategic Trade Development for 2017-2021, which provides for a gradual increase in export competitiveness Ukraine due to the intensification of investment and innovation processes, including through the activities of the Export Credit Agency.

4. In the medium term, the influence of the factor of growth of remittances in the conditions of high activity of labour migrants on the formation of the balance of primary incomes of the balance of payments of Ukraine is projected. However, in the conditions of the expected attenuation of the intensity of migration processes, the dynamics of the respective revenues will slow down during the forecast period.

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COMMON AFFAIR OF POLITICS AND EDUCATION: DEMOCRACY, CIVIL SOCIETY, PERSONALITY

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Summary

This article considers the problem of the correlation of the politics and education. The scientific approaches to understanding the upbringing and teaching as one of the important spheres of the state politics are analysed. In the borderlines of this scientific approaches the education becomes the service instrument of the satisfaction of the outside education interests. Opposite approach according to which the regime of politics substantially differs from the regime of police by its attitude to power is simultaneously motivated. Politics can exist in the form of participation of citizens in the common affair, as democracy, as an uninterrupted debate concerning common affair. However democracy means the appropriate level of enlightenment and education of the mass. Thus regime of the politics can exist only supported by education. The essence of the education as a common affair is realized in the conditions of the democratic equality. Not only politics can exist supported by education, but the education corresponds to the logic of human development.

Keywords: Education, culture, politics, ideology, democracy, state.

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1. Introduction

According to the literature devoted to the problems of education, there is a specific mainstream, according to which politics and education are presented as two opposite, not having an internal interrelation of the sphere of public life. Their external connection is allowed in a strictly hierarchical form: either education is subordinated to politics, or politics must be subordinated to education. The first option more often dominates when describing the current situation in society; the second one exists with the institution of the proper public order.

However, in everyday life we most often come across the option of subordinating education to politics. The subordination of education to politics does not necessarily have a conscious, purposeful character. In this regard, the concepts that are common in our time, relating knowledge and power, ideology and education, are illustrative. In these approaches, education becomes the sphere of embodiment of government practices. In other words, it appears to be one of the “authorities of power”, one of the “pure” incarnations of the desire of the state or society to educate the rights of citizens and it is one of the effective ways of legitimizing the existing social order. This state of affairs suggests that, firstly, politics is identified with the struggle for power, and secondly, that the purpose of the institution of education is basically limited to the fulfillment of the “social order” of power.

Purpose of the article is to investigate the relationship between education and politics in the process of realizing the common cause peculiar to both of them such as the formation of the human community.

2. The analysis of recent research and publications

The problem of the correlation of politics, power and education is presented in many studies. Among them, M. Foucault's works are important, in which the interrelation between the education and the formation of disciplinary authority is examined. "Any education system is a political way of maintaining or changing the forms of appropriating discourses with all the knowledge and forces that they entail," he wrote on this matter (*Foucault M., 1998: 74*).

Such point of view has been existed since the time of K. Marks in studies devoted to the influence of ideology on the process of the formation of public consciousness, so it is not surprising that the followers of his ideas developed this theme. For example, from the point of L. Althusser's view, the school appears as an institution for the reproduction of the labor force in accordance with the existing structure of the division of labor. It follows that the school is the place for formation of professional qualifications and reproduction of subordination of the individual to the rules of the established order. "That is, the reproduction of the subordination of the dominant ideology of the workers and the reproduction of the ability to correctly manipulate the dominant ideology of the exploiters, so that they and" in words "also ensure the domination of the ruling class" (*Althusser L., 2011: 23*).

Proceeding from these pre-conditions, P. Bourdieu (a student of L. Althusser), along with J.-C. Passeron developed their own concept of the "sociology of education". In their joint study "Reproduction: elements of the Theory of the Education System," they revealed the specifics of the relationship between the education system and the system of class relations. From their point of view, the "democratization" of social relations gradually leads to the fact that the government ceases to rely on the mechanisms of physical coercion and begins to widely use "symbolic violence" (*Bourdieu P., Passeron J.-Cl., 2007: 19*).

P. Bourdieu and J.-C. Passeron also believed that the transformation of social conditions leads to "that the transfer of power and privileges now, more than in any other society, must be bypassed through recognition by the educational system. Social conditions do not allow pedagogical violence to openly manifest its truth of social violence" (*Bourdieu P., Passeron J.-Cl., 2007: 19*).

In another work "The Education System and the System of Thinking" of P. Bourdieu, the education was defined as a way of "ordering the dominant hierarchies and classifications", and the school as "the queen of classifications and classroom" (*Bourdieu P., 1997: 119*). Despite the fact that the education system is interpreted by most modern researchers as a way of imposing ideological ideas about the world and the place of a person in it, it can simultaneously serve as a basis for overcoming ideological dictates. The fact is that with the help of education a person gets the opportunity to make the object of his attention as the foundations of his activity and thinking (*Bourdieu P., 1997: 119*).

Important for our research is H. Arendt's work "The Crisis in Education" in which she criticizes the interpretation "education became an instrument of politics, and political activity itself was conceived of as a form of education" (*Arendt H., 1961: 185*). The difference between politics and education is that the first is the sphere of interaction between equals, and the second is the interaction of adults with children, which is initially understood by H. Arendt as "authoritarian". Such a shift of politics beyond the boundaries of education may paradoxically

contribute to the market colonization of education and the accompanying “politics of depoliticization” (*Szkudlarek T., 2013: 1*).

Despite a long tradition of juxtaposing education and politics, “the connection between educational and political theories seems still to be underestimated” (*Szkudlarek T., 2013: 1*). Education cannot be just a preparation for adult life, which is associated with politics. If democracy, the principles of civil society are not present in the school life of children, then one should not expect that they will be present in their life after school (*Biesta G., 2014: 101*).

3. Heterotopy of education

There are two options for interpreting the existence of a politics in education. One of them directly notes the importance and legitimacy of the presence of politics in education as its main determinant. Politics is the driving force behind education. The state (the possibility of the existence of politics in this case is identified with the state) uses the education system to justify its existence. It should be mentioned that even Aristotle’s question about education and its goals is directly related to the welfare of the state (*Aristotle, 1983: 628*).

As the consequence the long tradition of interpreting education in the context of the process of legitimizing the existing regime of power appeared. Illustrative examples of such an instrumental attitude to the education system can be found in the texts of numerous utopias and anti-utopias, which for the most part give education one of the leading roles in building an “ideal” society. In this situation, the educational system is assigned the role of a conductor of the idea of power. Any anti-utopia can’t exist without a description of the education system, which is designed to serve as an effective tool for influencing the human consciousness, its production in accordance with the needs of the existing order. However, not only the ideal, but also the real state seeks to educate and form the person as it needs. The example of anti-utopias represents a variant of the explicit use of education for the purposes of political power, when “symbolic violence” is reinforced by all other types of violence and is provided by them. Here the political authorities often do not even try to hide their violent nature.

At the same time, the indicated option of using education for purposes of politics implies the possibility of opposing the influence of power. “There is power so there is opposition” (*Foucault M., 1996: 195*). Even in totalitarian societies, education managed to find ways to avoid practices prescribed by politics and was never completely exhausted by them.

The point is that education, in order to remain itself, must be rooted in a culture that opens the possibility of forming immunity against the viruses of power. In turn, the lack of immanent cultural resistance to the actuality of the present indicates a kind of immunodeficiency of culture (*Pakhlovskaya O., 2003: 83*).

In this perspective, we are dealing with the ability of education (more broadly than culture) to constitute “other spaces” of social interrelations, which can be defined as heterotopies or realized utopia according to M. Foucault’s words (*Foucault M., 2006: 197*). Heterotopies of education are constituted outside of total determination by political power.

At one time, P. Bourdieu defined politics precisely as a struggle for “imposing a legitimate principle of vision and division, dominant and recognized as deserving of this, that is, full of symbolic violence” (*Bourdieu P., Kachanov Yu., Pento L., Shmatko N., 2001: 125-126*). According to this point of view, the institution of education is characterized by the practice of “symbolic violence”, in which the interrelation between politics and education is revealed. So, politics, which appears nothing more than a struggle for power, allows education in the form of

one of the effective ways of producing ideological ideas of the individual about the world and its place in it.

On the example of the functioning of ideology, the mechanisms of “symbolic violence” one can observe the implicit, hidden use of education for the purposes of political struggle. Subjects of the pedagogical process reproduce the dominant ideas, often not realizing their ideological bias, partiality and abstractness. In this case, the apology of the existing social order unfolds not as the execution of an explicit order of power, but as a “natural” process of transferring information from one generation to another. However, this relationship between politics and education substantially distorts their real nature.

4. Politics, symbolic order and democracy

The traditional understanding of politics as a struggle for power is contested in the framework of J. Ranciere’s theory. From his point of view, the situation described does not correspond to politics, but to the police. In other words, not everything that revolves around power is politics. And even more than that, what revolves around power is not politics. “Politics is not the exercise of power. We immediately omit and jump over it, if we identify it with the practice of power and with the struggle for its possession,” the researcher wrote (*Ranciere J., 2006: 195*). Consequently, the power is the point of attraction of the police, an order in which it is impossible to separate the sensory among all participants in the process, it is impossible to dispute the general.

Politics, understood as a struggle for power, tends to slip into the practice of management with the help of technical means created by the order. It assumes the existence of a common as some kind of predetermined, natural entity. Within these boundaries, politics does not appear to be a project that needs to be jointly implemented and then maintained, but as a fact already completed. Therefore, “symbolic violence” is conditioned by the desire to protect such an established order in which a certain group of people occupies a position appropriate to their interests and needs. Hence it turns out that the one who seizes state power is no longer interested in the existence of a political regime, the regime of a dispute over a common one, he seeks to replace politics with a management regime, and a dispute around the common with consensus. But, as J. Ranciere writes, “politics is not the art of governing communities, it is a form of human action based on disagreement, an exception to the rules according to which the rallying of human groups and the management of them” (*Ranciere J., 2006: 13*).

In the history of social and political thought, the place of the common often becomes the state. In the historical perspective, it seeks to speak on behalf of the common, to be the personification of a common cause. In view of this, the state quite often appears to be a source of politics and, accordingly, a source of production of the “social order” for education. But in connection with the above, it is obvious that the state appears more a source of a uniform order, or, in other words, an abstract general, whose idealization turns out to be disastrous for politics. It, as a place of legal physical and “symbolic violence”, it turns politics into the police regime. The strengthening of the state can be accompanied by a growing unity of society, which paradoxically leads to the cutting off the common cause, to its abstractness and formality. “Strengthening of the state in practice turns into a trend that can be designated as an increasingly popular notion of depoliticization,” V. Kurennoy wrote (*Kurennoy V., 2008: 86*).

The essential characteristic of the process of depoliticization is the degradation of public space, i.e. such a space of human relations in which a person can be seen and heard as a sovereign individual. Public space is always constituted as though for the first time, and therefore,

it is not discourse (language of power) that is being developed within it, but parrhesia (free speech). If the order of the general already takes place, someone necessarily remains beyond its borders; someone is excluded from it, and therefore he remains invisible and unheard. His needs and interests do not exist. But in such conditions, the political process of participation in the creation of a common and not merely an adaptation to its available state forms ceases. In such a situation, both politics and democracy become impossible.

One should pay attention to the fact that the police regime borders on desymbolisation, so that the human community in this optics is exhausted by its existing existence, and hence human development in it is limited by the prevailing principles of empirical existence, which are not questioned. Within the framework of such an order, there are possible ways of implementing policies that are mutually exclusive such as consensus or antagonism.

Ch. Mouffe suggests his own solution to this problem. From her point of view, democratic politics does not exclude conflict, but it transforms antagonism into an agonistic form, which is the “we-they” relationship, in which the conflicting parties recognize each other's legitimacy. “They are “opponents”, but not enemies. This means that despite their participation in the conflict, the parties consider themselves to belong to a single symbolic space within which a conflict is taking place. One can say that the task of democracy is to transform antagonism into agonistic form” (*Pantin I., 2008: 98*).

Democracy is a system of institutionalized struggle for power. Without competition and conflict there will be no democracy. However, any society sanctioning the conflict risks in the end to come to the fact that this conflict becomes too intense to create a society that is so permeated with antagonisms and that civil peace and stability are compromised (*Mouffe Ch., 2005: 30-32*). In order to find a consensus solution to this problem, a single symbolic space is needed. So, outside the “single symbolic space”, politics as a democratic process becomes problematic. Hence the constituting of symbolic space appears decisive for the development of democracy. Outside this space the conflict develops into antagonism. From our point of view, education is the common thing in which a single symbolic space is built.

Politics, unlike the police, assumes not just a common one, in which every single one drowns, dissolves. It assumes such a general, which is the unity of diversity, such a unity in which the singular becomes special. Such concrete-general (as universal) is impossible beyond the conflict of unitary positions that contradict each other. They are not a sign of the depravity of a concrete general, but a prerequisite for its existence. After all, a single symbolic space cannot be empty, abstract universality, which is superimposed superficially on the individual, so forcing it. Otherwise, we are not dealing with a common symbolic space, but with symbolic violence.

5. Education as a political cause

A single symbolic space is recreated every time anew in the circulation of one person to another, one generation to another generation. In this appeal the human community is created and existed. Thus, we with necessity, reflecting on politics, turn to thinking about the cultural ways of constituting the human community. It is obvious that education has always played and continues to play a crucial role in this process. And education is understood as a common cause, rather than an area that is exclusively within the jurisdiction of a limited number of professionals.

It should be emphasized that if there is no truly common cause, the measure of the presence of symbolic violence increases. Politics is constituted as a public sphere, as a space where

a person can be seen and heard. Besides, this space gives a person the opportunity to see in oneself another, to perceive oneself as another. The common cause refers to the ancient tradition of coexistence in the “res publica” mode. “In the classical republican tradition originated from Aristotle and Cicero through Machiavelli, Montesquieu and Tocqueville to such theorists of the twentieth century as Hannah Arendt or Charles Taylor, the term res publica means such a common cause for which it stands live and even lay down his head. The Republic in their understanding is more than a form of government; this is a certain state of the people, supported by the constant participation of citizens in solving issues of general importance,” O. Kharkhordin writes (*Kharkhordin O., 2009: 15*). According to this tradition, the politics creating the prerequisites of a common cause can be a democracy that relies on enlightenment.

In this context, it will be useful to turn to an understanding of democracy in the works of L. Strauss who believed that the question of education is a political issue par excellence, since it allows to solve the problem of “how to reconcile an order that does not oppress, with freedom that is not abused” (*Strauss L., 2012: 25*). The solution to this problem becomes possible if democracy is understood as a community of educated people. “Democracy is a political order in which all or most adults are virtues, and since virtue seems to require wisdom, it is a regime in which all adults, or most of them, are virtuous and wise, or a regime in which all or most adults developed their minds to a high degree, or rational society. By democracy, in a word, is meant the existence of an aristocracy, expanded to a comprehensive aristocracy” (*Strauss L., 2000: 311-312*). Proceeding from this understanding of democracy, the relationship between politics and education is revealed in a different perspective: education does not fulfill a political order, but creates a condition for the possibility of politics as such.

The situation is complicated by the fact that any power is peculiar to be invisible, implicit. After all, “coercion does not lead directly to conviction” (*Strauss L., 2012: 13*). The result of effective “symbolic violence” is the naturalization of power, the transformation of subjects of social ties into its personification. The implicit, unreflexive dominance of the abstract-general in the pedagogical process gives the educational environment the bizarre forms in which the formation and production of the individual become identical. As a consequence, politics, the state, and the existing social order are given the opportunity to solve their specific problems through education. To solve the specific problems with the help of a person ultimately. From the point of J. Dewey’s view, education should not have a goal outside of itself, it is the same as “growth” (*Dewey J., 2000: 54*). In a democratic society, as the thinker believed, the goal of education should be to create the possibility of continuing human growth. This is possible on the basis of equality, outside of which education begins to obey the goals imposed on him from outside. “The latter always arise if inequality persists in a society. In this case, the goals of some social groups are determined by external dictates, and are not appeared in the course of free development of experience, they serve as means for achieving other, supposedly higher, but alien goals” (*Dewey J., 2000: 200*). Thus, the essence of education as a common cause is realized in conditions of democratic equality. Not only politics is possible with the assistance of education, but the latter is consistent with the logic of human development, i.e. it has no goal outside of itself, only in the regime of politics, in the mode of open possibility of a dispute about the general.

6. Conclusions

Education is nothing more than a common affair; it is a “republic” in which the personality of all its subjects develops: both teachers and students. This is a joint venture, since

the formation of personality is a social event. Otherwise, the formation of personality occurs as a gift of the personal origin from one person to another. But in order to give something as a gift, it is necessary to have it. And since the personality is not a gift and it does not belong to an isolated self, so it is necessary to keep up to date the personal principle. The existence of the personality is created between the notions “I” and “you”, and not “inside” the opposing and isolated “ego”. Without “you” there is not and cannot be “I”. If the essential connection between people is torn apart for various reasons, only “ego” remains. But the totality of “ego” cannot create a universal symbolic order, they interact as parts that try to preserve their “individuality” at any cost. The lack of experience of participation in the universal excludes them from a common cause in which they perceive the threat of their own exclusivity. In general, a person appears not just private, which is opposed to the common. In general, a person appears as special, i.e. one that embodies, bears within itself the universal. At this point, politics and education are getting closer. They are the practice of creating and sharing a common, taking an active participation in it.

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GLÓWNE METODY STYMULOWANIA WDRAŻANIA ENERGOOSZCZĘDNYCH TECHNOLOGII STOSOWANIA PODATKU WĘGLOWEGO

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Adnotacja

W artykule podkreślono niską efektywność podatku węglowego jako narzędzia fiskalnego i narzędzia zachęcającego przedsiębiorstwa do wdrażania odpowiednich środków środowiskowych i racjonalizacji zużycia energii. Uzasadnione jest, że ze względu na niski poziom obecnej stawki podatku, podatek węglowy nie jest ważnym instrumentem podatkowym, na który władze nie zwracają należytej uwagi w kontekście rosnących wpływów z podatków środowiskowych, a co za tym idzie podstawę dochodów dla publicznych wydatków na ochronę środowiska. Zdecydowano, że motywacja przedsiębiorstw do inwestowania w technologiczne działania energooszczędne powinna być realizowana poprzez wdrożenie mechanizmu regulacji przez państwo emisji gazów cieplarnianych, tworzącego dźwignie ekonomiczne potrzebne do zachęcania ukraińskich przedsiębiorstw do zmniejszania energochłonności ich produkcji. Formalnie podatek od emisji dwutlenku węgla znajduje się w aktywach dźwigni ekonomicznych rządu, ale ze względu na niski poziom jego obecnej stawki w praktyce nie działa on jako instrument zachęcający przedsiębiorstwa do podejmowania działań w celu ograniczenia emisji dwutlenku węgla.

Zaproponowano zestaw systematycznie uzgadnianych propozycji zwiększenia efektywności podatku węglowego, co pozwoli zintensyfikować jego stosowanie w sferach środowiskowej, energetycznej i ochrony klimatu ukraińskiej gospodarki. To z kolei pomoże stworzyć mechanizm zachęcający firmy do wdrażania działań technologicznych na rzecz oszczędzania energii, gromadzenia środków na ekologiczną modernizację produkcji oraz stworzenie efektywnego finansowo i środowiskowo systemu opodatkowania gazów cieplarnianych, pozwoli na uzgodnienie organizacyjne i ekonomiczne mechanizmy polityki środowiskowej i energetycznej między sobą, zarówno wewnątrz kraju, jak i zgodnie z wymogami międzynarodowymi oraz do kształtowania krajowej polityki klimatycznej.

Słowa kluczowe: metody motywacyjne, podatek węglowy, technologie energooszczędne, polityka klimatyczna.

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1. Sformułowanie problemu

Z każdym rokiem pogłębiają się problemy związane ze zmianami klimatycznymi i globalnym ociepleniem, zwiększając tym samym zagrożenia środowiskowe i komplikując funkcjonowanie gospodarek narodowych wszystkich krajów, co z kolei prowadzi do pilności działań na rzecz redukcji emisji gazów cieplarnianych. Jednocześnie według Światowej Organizacji Meteorologicznej za lwią część szkodliwych emisji i 85% takiego zjawiska jak efekt globalnego ocieplenia odpowiada emisja dwutlenku węgla (*National Ecological Center of Ukraine, CAN-International, 2014*).

Ze względu na to, że te emisje są identyfikowane jako najbardziej niebezpieczne źródło zanieczyszczenia powietrza, jednym z najskuteczniejszych narzędzi, które od ponad trzydziestu lat są szeroko stosowane w krajach rozwiniętych do regulacji tych szkodliwych emisji, jest dwutlenek węgla (CO₂). Podatek – tzw. podatek węglowy, który został wprowadzony w szczególności na Ukrainie, jako samodzielny składnik ogólnego systemu podatków środowiskowych. To właśnie podatek węglowy, jak udowodniły już międzynarodowe praktyki jego stosowania, jest ekonomicznie i ekologicznie efektywnym narzędziem, które zachęca przedsiębiorstwa do redukcji emisji dwutlenku węgla, dzięki możliwości zapłacenia mniejszej kwoty podatku, pod warunkiem, że wdrożą odpowiednie środki ochrony środowiska i zrationalizują zużycie energii. Oczywiście jest, że usprawnienie krajowego systemu podatków środowiskowych, w szczególności podatku od dwutlenku węgla, z pewnością przyczyni się do zintensyfikowania procesu decyzyjnego w zakresie redukcji emisji gazów cieplarnianych i wdrożenia zestawu działań w zakresie efektywności energetycznej.

2. Analiza najnowszych badań i publikacji

Przypomnijmy, że podatek węglowy został po raz pierwszy zaproponowany przez profesora Massachusetts Institute of Technology (USA) Davida Wilsona (David Gordon Wilson) w 1994 roku, zaledwie 27 lat temu (*The official site of Wikipedia, 2018*). Jednak pomimo swojego „młodego wieku” należy zauważyć, że jego teoretyczne podstawy, które dowiodły w praktyce znaczącego pozytywnego wpływu zastosowania go jako regulatora redukcji emisji dwutlenku węgla, były aktywnie rozwijane w zagranicznych źródłach, które z kolei stały się mocną nauką i stosowaną podstawą do wprowadzenia podatku węglowego na wczesnym etapie w krajach europejskich. Należy pamiętać, że nadal istnieje tendencja wzrostowa w liczbie stanów, które stosują ten podatek. W szczególności Japonia, Korea Południowa i Republika Południowej Afryki ogłosiły już odpowiednie zmiany w swoich budżetach i systemach podatkowych. Jednak nadal trwają aktywne badania mające na celu poprawę metod administracji i wysokości stawki podatku węglowego Sachs J., Nordhaus W., Becker G., Pope C., Pezzey J., Mankiw G., Kaufman N., etc. Jak również kwestie jego efektywności środowiskowej, ekonomicznej i społecznej Smith S., Yujie Lu; Xinyuan Zhu; Qingbin Cui, Humphreys J., etc.

Zbadano skuteczność wykorzystania podatku węglowego w walce ze zmianami klimatycznymi Pearce D., Lake T., Tickell O., Neuhoff Kr., etc. Podobne problemy badają także ukraińscy naukowcy Maslyukivska O.P., Ogarenko Y.V., Haidutsky I.P., Avramenko N.L., Naidenko O.E., Dubovyk O.E., Martyniuk I.V., Ivanenko N.P. (*Maslyukivska O.P., 2007, Ogarenko Yu.V., 2015, Gaidutsky I.P., 2016, Avramenko N.L., 2016, Naidenko O.E., 2016, Dubovyk O.E., 2014, Ivanenko N.P., 2011*). Warto jednak zwrócić uwagę na poważny brak krajowych profesjonalnych badań nad teoretycznymi, metodologicznymi i stosowanymi aspektami stosowania podatku węglowego na Ukrainie, pomimo tego, że jego wysoka efektywność środowiskowa i ekonomiczna została już udowodniona i nie tylko jako efektywne narzędzie zarządzania dziedzinie zużycia energii i ochrony środowiska, ale także jako ważne narzędzie walki ze zmianami klimatycznymi (*PricewaterhouseCoopers, 2007*).

Jednak wśród indywidualnych opracowań ekspertów ukraińskich należy zwrócić szczególną uwagę na trzy mocne opracowania teoretyczne i stosowane, które różnią się między innymi złożonością i szczegółowością dokumentacji (*Ogarenko Yu., 2011*).

A obecny brak krajowych badań nad podatkiem węglowym, moim zdaniem, można wytłumaczyć brakiem aktywnego stanowiska państwa w tej sprawie, a więc słabymi ramami instytucjonalnymi, chociaż Porozumienie paryskie, przyjęte w 2015 r., zobowiązuje wszystkie

państwa do podjęcia starania o utrzymanie średnich temperatur na świecie, a Układ o stowarzyszeniu między Unią Europejską a Ukrainą przewiduje m.in., środki mające na celu redukcję emisji gazów cieplarnianych i wdrażanie środków w zakresie efektywności energetycznej. Nawiasem mówiąc, oprócz konieczności wypełniania zobowiązań międzynarodowych Ukrainy, a także edukacji rządu i perspektyw w tej kwestii, myślę, że ważne jest, aby zdać sobie sprawę, że opóźnienia we wdrażaniu środków ochrony klimatu prowadzą do wyższych stawek w przyszłości, nie tylko techniczne, ale i finansowe. Z ekonomicznego punktu widzenia najlepiej jak najwcześniej rozpocząć redukcję emisji gazów cieplarnianych poprzez przyspieszenie tego procesu poprzez mechanizmy i narzędzia regulacyjne, w tym podatek węglowy. Jednak w krajowych źródłach eksperckich kwestie uzasadnienia i przedstawienia zestawu metod i działań na rzecz poprawy efektywności podatku węglowego jako skutecznej zachęty dla firm do ograniczania emisji dwutlenku węgla pozostają niewystarczająco ujawnione, ze względu na możliwość płacenia mniejszych pieniędzy, jeśli zostaną podjęte odpowiednie środki w zakresie ochrony środowiska i efektywności energetycznej.

Cel artykułu. Sformułowanie systematycznie uzgadnianych propozycji praktyk zarządzania w celu zwiększenia efektywności podatku węglowego i zintensyfikowania jego stosowania w sferach środowiskowej, energetycznej i klimatycznej ukraińskiej gospodarki.

3. Prezentacja głównego materiału badawczego

Centrum podatku węglowego (Carbon Tax Centre) definiuje podatek od emisji CO₂, jako podatek od zawartości węgla w paliwach kopalnych” (*Carbon Tax Centre, 2009*). Jest to więc podatek od emisji CO₂ ze spalania paliw kopalnych. Z reguły podstawą opodatkowania tego rodzaju podatku środowiskowego jest ilość paliw kopalnych i zużycie energii elektrycznej. Ustalenie podstawy opodatkowania i optymalnej stawki podatkowej (tj. Ceny emisji każdej tony CO₂) to główne wytyczne dla wprowadzenia podatku węglowego. W praktyce światowej stawka podatku węglowego różni się znacznie w poszczególnych krajach i waha się od 10 do 150 USD za tonę CO₂ (*J. Sumner, L. Bird, and H. Smith, 2009*). Ze względu na różnicę w stopie dyskontowej, w tym lub z wyłączeniem kosztów szkód dla ekosystemów, ocena subiektywna możliwości technologicznych. Jednocześnie w większości krajów, które wprowadziły podatek węglowy, ustalenie jego wielkości jest z jednej strony wynikiem kompromisu ekonomiczno-politycznego, z drugiej zaś kompromisem społeczno-środowiskowym.

Organizacja została założona w styczniu 2007 roku w Stanach Zjednoczonych (Nowy Jork) w celu promowania wprowadzenia opodatkowania emisji dwutlenku węgla, a także metanu i innych gazów cieplarnianych w celu ograniczenia procesu globalnego ocieplenia. 4 O trafności stosowania podatku węglowego dla Ukrainy świadczy istnienie znaczącej potencjalnej podstawy opodatkowania emisji dwutlenku węgla oraz wysoka energochłonność gospodarki. Zatem według Państwowej Służby Statystycznej Ukrainy emisje dwutlenku węgla przez przedsiębiorstwa do atmosfery są największe spośród wszystkich zanieczyszczeń, a od 2015 roku obserwuje się tendencję wzrostową: jeśli łączna wielkość emisji dwutlenku węgla wśród ludności w 2015 r. wyniosła 138,9 mln ton, to w 2016 r. już 150,58 mln ton (bez okupowanych terytoriów Krymu i Donbasu) (*State Statistics Service of Ukraine, 2016, State Statistics Service of Ukraine, 2017*).

Jednocześnie niektóre indykatoryne wyniki kalkulacji skutków niskiej aktywności na Ukrainie wskazują, że mogą one mieć pozytywny wpływ do 2050 r. Na wzrost PKB, który wzrośnie o 36%. W szczególności wdrożenie takich środków w przemyśle dodaje 28% do oprogramowania, 3% do sieci ciepłowniczych, 3% do sieci ciepłowniczych, 3% do sieci ciepłowniczych i 3% do sieci ciepłowniczych.

W związku z tym realizacja krajowych środków polityki przeciwdziałania zmianom klimatu może mieć istotny pozytywny wpływ na aktywną strukturalną i technologiczną odnowę ukraińskiej gospodarki w oparciu o najnowsze światowe standardy, tworzenie produkcji na energooszczędnych technologiach. Wymaga to przemyślanej kompleksowej strategii nisko-emisyjnego rozwoju kraju, ukształtowanej przy udziale wszystkich najważniejszych aktorów procesu społeczno-gospodarczego – administracji i administracji, struktur biznesowych, organizacji pozarządowych, instytutów badawczych, niezależnych ekspertów. Zwracam uwagę, że w Kodeksie podatkowym Ukrainy podatek od emisji dwutlenku węgla pobierany jest ze źródeł stacjonarnych (głównie firmy z branży energetycznej i przetwórczej – produkcja metali i koks, produkcja chemiczna i petrochemiczna, produkcja cementu, przemysł spożywczy), chociaż do końca 2014 r. odpowiednio do dawnego art. 244 Ordynacji podatkowej w jego starej wersji podatek ten był nakładany na ruchome źródła zanieczyszczeń. Natomiast od 2015 roku opłata za emisje do powietrza z mobilnych źródeł zanieczyszczeń w przypadku używania paliw pobierana jest przez podatników w zależności od ilości i rodzaju paliwa, który jest sprzedawany lub importowany na obszar celny Ukrainy i podlega opodatkowaniu w postaci odpowiednich podatków akcyzowych i należności celnych przywozowych. Obecna stawka podatku od emisji dwutlenku węgla wynosi 0,41 UAH. za tonę CO₂, art. 243 ust. 4 kodeksu podatkowego Ukrainy (*The Verkhovna Rada of Ukraine, 2010*). Ta „groszowa” stawka podatku (i równowartość w obcej walucie – nieco ponad półtora centa amerykańskiego) jest po prostu symboliczna: jest zbyt niska, aby wykonywać którąkolwiek z funkcji, dla których ten podatek został wprowadzony. Wskaźnik ten nie jest skuteczny w ograniczaniu emisji CO₂ przez podmioty gospodarcze i stymulowaniu inwestycji w technologie energooszczędne i nie jest szacowany na wystarczająco wysoki, aby zapewnić znaczne wpływy podatkowe (*Veklich O.O., 2008: 63-69*). Dla porównania: wpływy podatkowe budżetu norweskiego z płatności podatku węglowego w 2004 r. Wyniosły 7,808 miliardów koron norweskich (około 1,3 miliarda dolarów), na co odpowiada średnia stawka podatkowa w wysokości 21 dolarów za tonę CO₂. W 2010 r. Dochody z tego podatku, choć zmniejszone, nadal wynoszą znaczną kwotę – 2,5 mld koron norweskich (równowartość 286 mln euro) (*International Energy Agency, 2005, International Energy Agency, 2011*).

Dodatkowo na Ukrainie podatek węglowy naliczany jest tylko dla tych podmiotów, które emitują ponad 500 ton CO₂ rocznie (tylko ~ 60% podmiotów), czyli niektóre sektory i podmioty w ogóle nie płacą podatku od emisji CO₂. Jednocześnie wpływy podatkowe z tytułu płacenia podatku węglowego są „rozpuszczane” w budżetach państwowych i samorządowych. A dzieje się tak przy braku odpowiedniej kontroli i weryfikacji przedłożonych danych o emisjach dwutlenku węgla.

Oczywiste jest, że motywacja przedsiębiorstw do inwestowania w technologiczne środki energooszczędne powinna być realizowana poprzez mechanizmy polityki państwa w zakresie regulacji emisji gazów cieplarnianych, w której arsenale brakuje ekonomicznej dźwigni, która stworzyłaby wewnętrzną zachętę dla Ukraińców. przedsiębiorstw do zmniejszenia energochłonności. Oznacza to, że mamy do czynienia z sytuacją, w której z jednej strony dźwignia rządowa formalnie istnieje i stosuje podatek od emisji dwutlenku węgla, az drugiej – ze względu na niski poziom jego obecnej stawki nie działa tak naprawdę jako instrument zachęcający przedsiębiorstwa do wdrażania działań na rzecz redukcji emisji dwutlenku węgla. Jednocześnie, ze względu na niski poziom obecnej stawki, podatek węglowy nie jest ważnym podatkowo instrumentem podatkowym, na który władze nie zwracają należytej uwagi w kontekście rosnących wpływów z podatków środowiskowych, a co za tym idzie, zwiększenie bazy dochodowej dla publicznych wydatków na ochronę środowiska. Należy również zauważyć, że Ordynacja podatkowa nie

zawiera przepisów dotyczących trybu obliczania i administrowania opodatkowaniem emisji dwutlenku węgla (nawiasem mówiąc, a także dwóch innych rodzajów gazów cieplarnianych – metanu i podtlenku azotu).

Ponadto w ramach ogólnego systemu ustaw i rozporządzeń w zakresie ochrony powietrza (w szczególności w systemie ram prawnych i organizacyjnych oraz wymagań środowiskowych w zakresie regulacji emisji zanieczyszczeń) nie są przydzielane na żadnym gruncie emisje gazów cieplarnianych ani sektory / kategorie źródeł, ustanowione Protokołem z Kioto, a obliczanie rzeczywistych emisji gazów cieplarnianych i obliczanie na ich podstawie podstawy opodatkowania emisji dwutlenku węgla odbywa się na podstawie algorytmu metodologicznego, który nie ma podstaw prawnych. Jednak pomimo rozczarowującej sytuacji na Ukrainie związanej z prawnym formatem podatku od dwutlenku węgla, biorąc pod uwagę powyższe perspektywy oraz wysoką efektywność środowiskową i gospodarczą, o czym świadczą wieloletnie pozytywne doświadczenia zagraniczne, konieczne jest znaczne zintensyfikowanie działań na rzecz wzmocnienia jego oddziaływania na środowisko. polityka energetyczno-klimatyczna Ukrainy. Wymaga to szeregu kroków o charakterze naukowo-analitycznym i zarządczym. Po pierwsze, podatek muszą płacić wszyscy, którzy używają paliw kopalnych. Po drugie, stawka podatku powinna zależeć od zawartości węgla w danym paliwie. Po trzecie, stawka podatkowa powinna zachęcać do zmniejszenia zużycia paliw kopalnych lub przejścia na paliwa alternatywne. Sprzyjać temu będą wyższe stawki podatku od emisji CO₂. Dlatego tryb i harmonogram stopniowego podnoszenia stawek podatku od CO₂ do optymalnego ekonomicznie i społecznie poziomu powinny zostać określone prawem, co powinno wzmocnić jego potencjał fiskalny i znaczenie dla systemu finansowego oraz stymulować zmiany strukturalne w gospodarce.

Ważne jest, aby wzrost stawki tego podatku był rozsądny, stopniowy, przejrzysty z określonymi wyraźnymi etapami i uregulowaniem w Kodeksie budżetowym Ukrainy wykorzystania dochodów z tego tytułu przede wszystkim na realizację działań przewidzianych przez niskoemisyjną strategią rozwojową. Stopniowe podnoszenie stawek podatku od gazów cieplarnianych do poziomów optymalnych ekonomicznie i społecznie zapewni jednocześnie możliwość: uzyskania znacznych wpływów do budżetu z tytułu opodatkowania GHG; stworzyć dodatkowe źródło finansowania środków oszczędzania energii; stymulowanie inwestycji przedsiębiorstw w technologie energooszczędne i rozwój energetyki odnawialnej, przyczyniając się tym samym do efektywności energetycznej, zmniejszając energochłonność gospodarki narodowej. W tym zakresie na szczególną uwagę zasługują wyniki modelowania wpływu podatku węglowego z wykorzystaniem różnych kategorii podatkowych na lata 2014-2030, udokumentowane przez ekspertów z Instytutu Ekonomii i Prognoz Narodowej Agencji Ukrainy. Należą do nich społeczno-ekonomiczne konsekwencje poprawy opodatkowania emisji dwutlenku węgla w wyniku wahań (podwyżek) hipotetycznych stawek podatkowych – od 3 do 25 dolarów za tonę CO₂ w latach 2016-2030.

Obecnie dochody z podatku od emisji dwutlenku węgla w latach 2016-2030 szacuje się na 33,8 mld USD, z zastrzeżeniem wysokiego poziomu opodatkowania energii, niskiego poziomu opodatkowania przemysłu (*Thompson Reuters Point Carbon Advisory Services, 2014, Mastle A., 2015*). Oczywiście te oceny ekonomiczne należy przeprowadzić w celu zapewnienia proaktywnych i aktualnych informacji urzędnikom rządowym i inwestorom na temat prawdopodobnych konsekwencji gospodarczych takich innowacji. Po czwarte, biorąc pod uwagę brak jakiegokolwiek instrumentu fiskalnego na Ukrainie, który ograniczyłby emisję CO₂ w sektorze transportu samochodowego, wskazana jest reforma systemu podatkowego, w szczególności poprzez wprowadzenie specjalnego podatku, który będzie naliczany w zależności od wielkości emisji CO₂ z samochodu i jego kosztu, tak jak ma to miejsce we wszystkich krajach UE.

Takie podejście do poboru podatków jest bardziej sprawiedliwe społecznie niż podejście uzależnione wyłącznie od pojemności silnika. Wprowadzenie specjalnego podatku od emisji CO₂ z pojazdów powinno być obliczane w zależności od wielkości emisji CO₂ oraz w zależności od faktycznych kosztów danego rodzaju i rodzaju paliwa silnikowego. Proponuje się rozliczanie tego podatku według sprawdzonego w praktyce mechanizmu opodatkowania akcyzą paliw silnikowych. Zapewni to zasadę: „im więcej jeździsz – im więcej zużywasz paliwa – im więcej emitujesz gazów cieplarnianych – tym więcej płacisz za zanieczyszczenie środowiska”.

Wprowadzenie takiego podatku zachęci do korzystania z paliw bardziej przyjaznych środowisku, gdyż stawka tego podatku powinna być zróżnicowana tak, aby niższa stawka podatku obowiązywała na paliwie bardziej przyjaznym środowisku, co będzie również stymulowało rozwój rodzimego przemysłu rafineryjny. Po piąte, biorąc pod uwagę, że rozszerzenie arsenału istniejących podatków i zwiększenie obciążeń podatkowych nigdy nie było popularnym środkiem rządowym, oczywiście jest również, że jakkolwiek wzrost obciążeń podatkowych, zwłaszcza w przypadku energii, dla której taryfy stale rosną, nie jest społecznie atrakcyjną decyzją polityczną. Oczywiście jest również, że jakkolwiek wzrost obciążeń podatkowych, zwłaszcza w przypadku energii, dla której taryfy stale rosną, nie jest społecznie atrakcyjną decyzją polityczną. W celu zapewnienia wsparcia społecznego i politycznego wskazane jest wprowadzenie podatku węglowego w ramach reformy podatku środowiskowego, który nie zwiększy ogólnego obciążenia podatkowego poprzez jednoczesne obniżenie stawek podatku dochodowego lub pracy (*Maslyukivska O.P., 2009*).

Wydaje się również właściwe zróżnicowanie rosnących stawek podatku od emisji dwutlenku węgla dla przemysłu i ludności, jak to jest w zwyczaju w Unii Europejskiej (Niemcy, Szwecja, Norwegia, Dania, Polska). Jednocześnie należy wziąć pod uwagę ugruntowane międzynarodowe doświadczenia w zakresie opodatkowania CO₂, ponieważ uzyskane tutaj osiągnięcia i błędne obliczenia mogą służyć jako przydatne wskazówki do opracowania skutecznych narzędzi redukcji emisji dwutlenku węgla na Ukrainie. Po szóste, gwarantuje się, że wpływy z podatku węglowego będą wykorzystywane zgodnie z ich przeznaczeniem (*Mastle A., 2015*).

Dlatego konieczne jest wprowadzenie mechanizmu rekompensat dla podatników z tytułu emisji dwutlenku węgla, środków wydanych (zainwestowanych) na oszczędność energii, który można wdrożyć w trzech obszarach: modernizacji technologicznej. Uzasadnione i konkretne propozycje wprowadzenia na Ukrainie podatku od emisji CO₂ z samochodu pobieranego przy pierwszej rejestracji i w zależności od jego kosztu, zawarte są w oraz w opracowaniu, które mają na celu poprawę efektywności energetycznej (np. w wysokości rocznego wzrostu inwestycji w realizację działań na rzecz rozwoju energetyki odnawialnej – dla zniesienia zielonej taryfy – oraz efektywności energetycznej – podlegają państwowej rejestracji takich inwestycji w określony sposób); przekazanie środków do Państwowego Funduszu Ochrony Środowiska (ewentualnie Państwowego Funduszu Efektywności Energetycznej), z ich późniejszym powrotem do przedsiębiorstw w formie dotacji. przekazanie środków do Funduszu Emerytalnego Ukrainy w postaci obniżenia odpowiednich składek, zgodnie z mechanizmem reformy środowiskowej i podatkowej (*Tokmylenko O., 2014*).

Przewaga drugiej opcji nad pierwszą polega na tym, że emisja dotacji stwarza konkurencję, a zatem jest bardziej prawdopodobne, że firmy będą skutecznie wdrażać działania oszczędzające energię, aby uzyskać przewagę konkurencyjną. Tym samym dzięki realizacji proponowanego zestawu działań nieenergetyczne i energochłonne sektory gospodarki narodowej otrzymają nie tylko środki na przyjazną środowisku modernizację, ale także długo oczekiwany mechanizm zachęcający firmy do inwestowania w energetykę. sektor. technologie. i fundusze

gospodarcze. Po siódme, istniejące fragmentaryczne prawodawstwo powinno stworzyć kompleksowe i skuteczne ramy regulacyjne w zakresie regulacji emisji gazów cieplarnianych, które są w pełni zgodne z porozumieniami międzynarodowymi, w tym porozumieniem paryskim i przepisami Unii Europejskiej.

W tym przypadku priorytetem powinien być zestaw pilnych środków legislacyjnych w celu poprawy opodatkowania emisji wszystkich trzech rodzajów gazów cieplarnianych. Należy podkreślić, że proponowane zmiany w Ordynacji podatkowej powinny być zgodne z odpowiednimi zmianami w Kodeksie budżetowym Ukrainy w zakresie wykorzystania środków pochodzących z wpływów podatkowych z tytułu emisji gazów cieplarnianych. Należy też mieć na uwadze, że ustalenie optymalnej stawki podatku węglowego, mechanizmy jego naliczania i poboru itd. Są to problematyczne i złożone zagadnienia metodologiczne, które dodatkowo wpływają na interdyscyplinarne aspekty wielu nauk, w szczególności teoria ekonomii, teoria finansów, makro- i mikroekonomia, ekologia, międzynarodowe prawo ochrony środowiska, które powinni rozumieć ci specjaliści.

Dlatego istotna jest kwestia odpowiedniego przeszkolenia personelu wymaganych specjalistów. Ponadto istnieje oczywiście potrzeba ogólnopolskiej organizacji szeroko zakrojonych działań edukacyjnych dla profesjonalistów i menedżerów, a także społeczeństwa na temat polityki klimatycznej, sytuacji w zakresie emisji gazów cieplarnianych na świecie i na Ukrainie oraz ich możliwych konsekwencji, Udział Ukrainy w ochronie klimatu oraz w zakresie poboru i wykorzystania podatków od emisji gazów cieplarnianych, kwestie organizacyjnych i ekonomicznych instrumentów i mechanizmów stymulujących oszczędzanie energii, odpowiednich ram prawnych itp (*National Ecological Center of Ukraine (NECU), (2016)*).

Na koniec należy zauważyć, że aby zachęcić firmy do korzystania z efektywności energetycznej, korzystania z odnawialnych źródeł energii i ograniczania emisji gazów cieplarnianych w tych trudnych ekonomicznie czasach, należy wprowadzić szereg korzyści, do których można zaliczyć: zero cła na materiały, sprzęt, komponenty i towary, które będą wykorzystywane podczas realizacji projektu redukcji emisji gazów cieplarnianych. W ten sposób realne wsparcie państwa otrzymają podmioty gospodarcze, które wdrażają działania w zakresie efektywności energetycznej, wykorzystania odnawialnych źródeł energii i redukcji emisji gazów cieplarnianych.

4. Wnioski

Proponowany zestaw systematycznie uzgadnianych praktyk zarządzania w celu zwiększenia efektywności podatku węglowego na Ukrainie przyczyni się do: po drugie, pozyskania środków na przyjazną środowisku modernizację produkcji i odpowiedni rozwój strukturalny gospodarki narodowej; po trzecie, stworzenie wydajnego finansowo i środowiskowo krajowego systemu opodatkowania emisji gazów cieplarnianych.

Po czwarte, wypracowanie konsensusu i spójności mechanizmów organizacyjnych i ekonomicznych polityki środowiskowej i energetycznej nie tylko między sobą na poziomie krajowym, ale także zgodnie z wymogami poziomu globalnego; po piąte, kształtowanie krajowej polityki klimatycznej.

Listę politycznych, ekonomicznych, środowiskowych, społecznych, a nawet reputacyjnych korzyści Ukrainy z wdrożenia proponowanego zestawu propozycji usprawnienia mechanizmu podatku węglowego można rozszerzyć, ale ważne jest, aby zrozumieć najważniejszą rzecz – poprawę efektywności podatek ten z pewnością pomoże zapobiec zmianom klimatycznym.

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TRANSFORMATION OF LEGISLATION ON LOCAL ELECTIONS IN DEMOCRATIC PROCESSES IN UKRAINE

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Summary

The article covers the transformation process of the legislation on local elections in Ukraine. It is mentioned that democratic elections are an important component of democratic transformations in the country as a whole, so it is important to conduct the search for the optimal model of the electoral system. However, the constant change of game rules in the electoral field may be evidence of manipulation and use of electoral procedures in favor of those in power and seeking to preserve their status.

Any transformations and reforms provide systemic and consistent changes. At least the party and judicial systems need to be improved in conjunction with changes to the election legislation. Party system needs to be improved because functionally parties should act as agents of political socialization, as well as recruit staff and form a political elite. Judicial system needs to be improved because each subject of the election process must have confidence in protection of their rights in case of their violation and have the ability to defend against abuse of power, fraud, corruption etc. Political education is also needed as a basis for raising the level of political culture and consciousness of society.

Keywords: local self-government, democracy, elections, political parties, electoral system, legislation.

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1. Introduction

Elections to the local self-government bodies are one of the defining democratic processes in the country. The modern election system must conform to the principles of democracy, transparency and legality, and facilitate competition that ensures the quality of the political elite. Elections are the only way to form local self-government bodies that have the right to act on behalf of the community and have the power to approve common binding resolutions in the corresponding area. It is relevant for Ukraine to improve the election system in a way which would correspond to the current level of democratic countries and take into account historical, cultural, economic, political and other national features. At the same time, changing the election rules too often is a pressing issue, since it obstructs the understanding of these rules by subjects of the electoral process.

2. Analysis of recent research and publications

The topic of constitutional and legal foundation of holding local elections in Ukraine has been reflected in the scientific works of such national scientists as V. Burdiak, M. Koziubra, Y. Kliuchkovskiy, R. Maksakova, O. Martseliak, V. Pakhalok, V. Pohorilko, M. Smokovych, M. Stavniichuk, V. Fedorenko and others.

3. Highlight of previously unsolved parts of the overall problem

However, the mentioned scientific works do not summarize the complete experience of transforming the legislation on local elections, and neither do they draw conclusions on the practicability and effectiveness of constant changes to the election rules and procedures in the context of democratic transformations in the country.

4. The purpose of the article

Based on the above, we set a goal of summarizing the complete experience of transforming the legislation on local elections and a goal of drawing conclusions on the practicability and effectiveness of constant changes to the election rules and procedures in the context of democratic transformations in the country.

5. Presenting the main material

G. Sartori wrote that the electoral system is the institution that is the most prone to being used with manipulative intent (*Sartori, 2001*). This can be concluded by analyzing how many times and when the election legislation in Ukraine had been changed. It had been changed on the eve of each subsequent election in Ukraine, which is unacceptable in terms of law, morality and common sense, however it had always been justified as being politically appropriate. It should be mentioned that passing electoral laws on the eve of the election contradicts the international election standards and practices proposed by the Venice Commission, according to which such legislation must not be changed during time period of less than a year before the election day.

It is worth acknowledging that the constant change of electoral legislation will not fundamentally change the functioning nature of the electoral institution. Conversely, it may hinder the development of the order and procedure of the election process. Constant innovations can lead to misunderstanding of many rules by both commission members and citizens.

The 1994 local elections were the first local elections in Ukraine. They took place on June 26, 1994 and took place simultaneously with the snap elections of the President of Ukraine. Local elections of 1994 were held based on the Law of Ukraine “On elections of deputies and chairmen of village, settlement, district, city, district councils in cities, regional Councils” on February 24, 1994 № 3996-XII (1994, February 24).

The typical features of these elections include: 1) local council chairmen (except for heads of district councils in cities) were elected directly by voters; 2) nomination of candidates was carried out by voters both directly at the meeting (assembly) of citizens and through political parties, movements, their electoral blocs, public organizations registered in accordance with the law, and labor collectives; 3) a deputy candidate who received the largest number of votes from the voters who took part in the voting process compared to other candidates, but not less than 10% of registered voters, was considered elected; 4) a candidate for the Chairman of the Council was considered elected in compliance with the requirements for a candidate for deputy, provided that at least 25% of registered voters voted for him; 5) elections were considered conducted if more than 50% of the total number of registered voters participated.

The 1998 local elections were held according to the new law “On Elections of Deputies of Local Councils and Village, Town, and City Mayors”, which was passed on January 14, 1998. Political parties, public organizations, and, importantly, self-nominated candidates were given

the right to participate in elections, which became quite a positive improvement in Ukrainian electoral legislation. The results of the 1998 local elections gave a serious impulse for comprehending the new role of political parties and formation of a democratic system of politically responsible local self-governing (1998, January 14).

The 2002 local elections highlighted the problem that consciously had not been resolved in the previous years and did not get resolved in the following 2006 election year, namely the simultaneous holding of local elections and the elections of People's Deputies of Ukraine. Voters were dissatisfied with the simultaneous holding of two such important events due to the difficulty of monitoring the election campaign on two levels at the same time. Simultaneity of the elections was also negatively perceived by members of district election commissions, who had to work under heavy workloads. A considerable amount of documentation, responsibility even in case of a mistake or inattentiveness, working several nights in a row, counting four, and in rural areas five different ballots affected physical and moral conditions of both members and chairmen of election committee, which often made re-count of the votes necessary.

The 2002 regular local elections were held according to the electoral system that was used in the previous local elections: 1) elections of deputies of the village, settlement, city councils and district councils in the city, village, settlement, city mayors, as well as deputies of the Verkhovna Rada of the ARC were held according to the majoritarian electoral system of relative majority in single-member electoral districts; 2) deputy elections of district and regional councils were held according to the majoritarian electoral system of relative majority in multi-member electoral districts.

The 2006 local elections were held according to the law "On Elections of Deputies to the Verkhovna Rada of the Autonomous Republic of Crimea, Local Councils and Village, Town, and City Mayors" that was passed by the Verkhovna Rada of Ukraine on April 6, 2004 which differed significantly from previous laws. Mainly because local elections were organized according to one law, which regulated all their types, unified election procedures, which had a positive impact on the organization and holding of elections. Change of the electoral system and the introduction of a new system of forming district election commissions became novel laws. The law did not separate holding of the parliamentary and local elections in time (Maksakova, 2006:87).

The law introduced a proportional electoral system according to which deputy elections of district councils in cities, city, district, regional councils, the Verkhovna Rada of the Autonomous Republic of Crimea were held with voting for voter lists from local party organizations (blocs) in multi-member electoral districts, the borders of which matched the borders of corresponding district in the city, city, district, region, the Verkhovna Rada of the Autonomous Republic of Crimea. Article 74 of the Law provided that the right to participate in the distribution of deputy mandates would be given to local party organizations (blocs) that achieved the 3% electoral threshold, and unallocated mandates would get distributed according to the largest remainder method between parties and blocs that achieved the electoral threshold (Maksakova, 2006:88).

Dualism of the electoral systems used during the elections can be considered one of the problematic issues of the 2006 elections. Voters were put in circumstances where they elected deputies to different local self-government bodies simultaneously, but in different ways. Voters had to learn all the intricacies of the electoral system, which was quite difficult, and in turn led to complications in making a confident and conscious choice.

Next regular local elections took place on October 31, 2010. The elections were held based on the Law of Ukraine "On the Deputy Elections of the Verkhovna Rada of the

Autonomous Republic of Crimea, Local Councils and Village, Town and City Mayors” of July 10, 2010 № 2487-VI (2010, July 10). These local elections had a similar situation with their date of holding as the regular presidential election of 2010, in that it was postponed several times. Specifically, the elections were originally set for May 30, 2010, later it was suggested to hold the elections on March 27, 2011, but October 31, 2010 became the final date. The biggest stumbling block in setting the date of local elections were different terms of authority of village, settlement and city mayors (4-year term – had not been changed) and local councils (5-year term – had been increased by 1 year), which was introduced by amendments to the Constitution of Ukraine in 2004. As a result, it was impossible to hold elections to local councils and elections of village, settlement and city mayors at the same time.

The typical features of the 2010 regular local elections include: 1) local elections were held separately from the parliamentary elections, which was certainly an improvement, since it considerably simplified the organization of their holding and increased voters' attention to local candidates and local political party organizations; 2) the proportional electoral system of rigid lists in the election of deputies to the Verkhovna Rada of the ARC, regional councils, cities of Kyiv and Sevastopol, district, city and district councils in cities was replaced by a hybrid (majoritarian-proportional) electoral system, under which half of deputies from the general list of the corresponding council gets elected by electoral lists from local political party organizations in a multi-member electoral district, and the other half of deputies – under the majoritarian system of relative majority in single-member electoral districts; 3) deputy elections of village, settlement councils, and elections of village, settlement, city mayors were left unchanged and were held according to the majoritarian electoral system of relative majority in one single-member district; 4) the term of the election process has been shortened almost by half from 90 to 50 days; 5) the role of the Central Election Commission in carrying out the election process in local elections was considerably reinforced.

Although the subsequent change of voting model was caused by the imperfection of the previous proportional model but unfortunately it did not become a significant step forward in the development of municipal government. The goals of expanding the role of political parties in the management of local affairs and increasing their responsibility have not been achieved.

In contrast to previous election laws, The Law on the 2010 Local Elections did not provide for the possibility of declaring a particular type of local election invalid. It was only possible to declare voting in individual election commissions invalid, but not in the corresponding type of local elections. This meant that regardless of the number of cleared voters during the election process and during the voting, the number and percentage of polling place where voting was declared invalid, local elections are considered conducted.

The prohibition against participating of slates (political party blocs) in elections should be included in the features of the new law. The mentioned norm was an advantage first and foremost for powerful political parties while small party structures were put into a virtually hopeless situation. Besides, no changes were made to the process of electing community chairmen which were elected by the relative majority principle.

A considerable disadvantage was the norm that political parties were determined as the only subject of nomination of candidates in majority districts, as well as chairmen candidates. The norm on revocation of right to participate in the process of forming election commissions of non-parliamentary groups seemed controversial organization-wise.

On July 14, 2015, the Verkhovna Rada of Ukraine passed the Law “On Local Elections”, which came into force on August 8, 2015 (2015, July 14). The mentioned law provided that the deputy elections to village and settlement councils would be held according to the majoritarian

system of relative majority, and deputy elections to oblast, district, city councils, and district councils in cities would be held according to the proportional electoral system. Mayor elections in cities where the number of voters is greater than or equal to 90 thousand, are held according to the majoritarian system of absolute majority (i.e., in two rounds if no candidate receives more than 50% of votes in the first round). Elections of village, settlement, city mayors where the number of voters is less than 90 thousand, are held according to the majoritarian system of relative majority i.e., in one round.

The law on local elections also included the following innovations: electoral threshold for political parties equaled 5%; slates are not able to participate in local elections; community organizations can be election observers; the number of deputies in councils had been reduced.

The Law defines the general membership (number of deputies) of a local council in relation to the number of voters. The minimum number of council deputies is 12 with the number of voters up to 1 thousand, the maximum is 120 deputies with the number of voters greater than 2 million. The law also provides the establishment of gender quotas in the list of deputy candidates for local elections. The party list must include at least 30% of same-gender members.

The ballot paper must indicate two candidates next to the name of the party: the first person is the general leader of the list, who will be indicated in all ballots in all districts (in case of the party winning the election he is guaranteed to become a deputy); the second person is assigned to a specific district (nomination in each district is not compulsory). Voters will simultaneously vote with one tick for the party, the leader of the list, and the candidate in the district, if one was nominated by the party.

In assessing the strong and weak points of the new law on local elections, experts have recognized the advantage of implementing two-round mayor elections in large cities, while the complexity of the election process and procedures has been named the main flaw of the passed law. Some experts have mentioned the constraint on opportunities for small parties and self-nominees, as well as the right of parties to nominate only one candidate per electoral district being the limit of the implemented "open lists" principle.

Despite the implementation of starosta as the new elected local government official, such elections were not held on October 25, 2015.

The beginning of the election process of the first elections of deputies of village, settlement, city councils and united territorial hromadas, and corresponding mayors started on September 9, 2017 and the first elections were held on October 29, 2017.

The 2020 local elections in Ukraine were not ordinary for the country. Firstly, because they were held during a pandemic and the voters had already got tired of politics. It could be considered that this factor influenced the low voter attendance: 37% in the first round, 29% in the second round, but this is within global trends: almost everywhere the voters are less interested in local elections than in the state elections, and attendance is always higher in the first round than in the second one.

The new Electoral Code came into force, which had its rules were rewritten close to the election date, confusing both candidates and voters.

Elections to city, district, village and settlement councils in settlements with less than 10 thousand voters were held according to the majoritarian system of relative majority, as before. Two to four deputies could be elected in one district.

The same way village, settlement, city mayors and village starostas of settlements with less than 10 thousand voters were elected according to the majoritarian system of relative majority.

Mayors in settlements with more than 10 thousand voters were elected according to the majoritarian system of absolute majority.

Furthermore, the Electoral Code implemented a system of open lists for settlements with more than 10 thousand voters. The same system was used in deputy elections of district, district councils in cities, city, village and settlement councils with appropriate number of voters, as well as to oblast councils. Only political parties had the authority to nominate candidates. While compiling the lists of candidates the parties had to maintain a gender balance of at least 40% of members of the same sex.

The passing threshold is 5%. The first candidate in the list is guaranteed to receive a deputy mandate. Candidates who obtained 25% of the electoral vote quota in their district or more are placed at the beginning of the list according to the number of votes for them in descending order. In case of obtaining equal number of votes, the order of candidates will remain as determined by the party at the time of voting. After the candidates who have passed to the council by quota, the rest of the candidates are placed in the order determined by the party.

Since United territorial hromadas were formed and oblast districts expanded as a result of the administrative reform in Ukraine, the number of local councils decreased. Thus, the total number of deputies also decreased.

The Electoral Code has kept the right of candidates to be nominated simultaneously as city, village or settlement mayors and as deputies of oblast councils, city councils and district councils. But now the candidate can be nominated to no more than two councils. Candidates for city mayors of cities with more than 75 thousand voters are allowed to be simultaneously nominated only to the city council, and the district or regional level council is unavailable for them.

6. Conclusion

Ukraine's legislation on local elections has been constantly changing over the last 30 years. Various electoral systems were used: majoritarian (absolute and relative majority in single-member and multi-member districts), proportional and parallel combining elements of majoritarian and proportional systems. A typical feature of elections in Ukraine are changes of electoral legislation on the eve of their holding. Moreover, most of these changes are not aimed at improvement of the electoral system, but at getting additional competitive advantages for the initiators of these changes who develop electoral technologies according to the planned innovations in advance. So, the electoral system of Ukraine is traditionally the object of applying electoral engineering technologies which are considered the means of adapting the most important electoral procedures for the effective realization of the interests of ruling elite concerning conquering and/or keeping political authority in the country, region, city, etc. (*Bebyk, 2001:68*). Such conclusions are nothing new, but are still relevant, unfortunately.

Any transformations and reforms provide systemic and consistent changes. At least the party and judicial systems need to be improved in conjunction with changes to the election legislation. Party system needs to be improved because functionally parties should act as agents of political socialization, as well as recruit staff and form a political elite. Judicial system needs to be improved because each subject of the election process must have confidence in protection of their rights in case of their violation and have the ability to defend against abuse of power, fraud, corruption etc. Political education is also needed as a basis for raising the level of political culture and consciousness of society.

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HEURISTIC POTENTIAL OF LUHMANN'S THEORY OF AUTOPOIESIS IN SOCIAL NETWORKS

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Summary

The beginning of the study of computer discourse was determined in the traditional categorical-instrumental set, therefore, a methodological leap is needed to enter a new round of understanding the situation. Appealing to interdisciplinary research makes it possible to involve the conceptual apparatus of mathematical and non-classical information theories and theories of complex systems. In our opinion, powerful heuristic potential has the concept of autopoiesis by N. Luhmann, which was, in turn, rethought by Humberto Maturana and Francisco Varela. According to the mentioned researchers, the Internet is a self-organizing system that creates a description of itself, and every communication that takes place in it also creates a self-description. According to the theory of systems by N. Luhmann, the structures of the system, which are built from its own operations, are organized in a similar way. The concept of autopoiesis made it possible to understand and study the dynamic structure of network communities, and this has also allowed to reconsider the perception of communication in the network which is fundamentally different from communication in reality. Processes of self-organization of network communities and the functioning of social networks in this context is an absolutely unique phenomenon that leads social development and humanity, however, it hides certain risks and shortcomings that are still insufficiently explored and need in-depth analysis. In particular, these are the laws of functioning of networks and factors of their self-reproduction.

Keywords: autopoiesis, Internet system, self – organization of communications.

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1. Introduction

The definition of the World Wide Web as a new communication space has long been a proven fact that is not disputed. However, the methodological contradiction of modern science is that the new virtual reality is described with the “outdated” categories. In a certain sense, this is a conflict between method and object. The beginning of the study of computer discourse was defined in the traditional categorical-instrumental set, that’s why a methodological leap is needed to enter a new round of understanding of new phenomena. Reality is changing, destroying all existing traditional ideas, contemporaneously transforming the ideas in the phenomenological aspect as well as epistemological preconditions. Thus, we can’t agree more with E. Lavrenchuk that “for studying new discursive practice we need a new conceptual and terminological apparatus, which is an adaptation of old conceptual and terminological paradigm regarding the new object of study, constructed in such a way that the nature of this object and the apparatus applied for its description are correlated with each other. In defining the conceptual and categorical apparatus, foremost we describe the constructive features of virtual

discourse that are the most important for us” (*Lavrenchuk, 2011:6*). Fully sharing this view, we believe that science nowadays should not be limited to the statement of factual material about the existence of communication, but should develop a special methodological basis for its further analysis. Same as the study of the social manifestations of the Internet should not be limited to the projection of a functionalist approach, forming outdated clichés from the concepts of real society.

In this sense, the theory of communication should be open to knowledge of related disciplines, it should be possible to rethink the developments in other sciences. The appeal to interdisciplinary research that gives opportunity to involve the conceptual apparatus of non-classical communicative theories, concepts of complex systems and synergetic principles, has a powerful heuristic potential. Such an interpretation allows us to find new significant meanings for progressing in the opposite direction.

In this context, the study of the realities of the Internet reality should involve the texts of modern researchers of the technogenic world, such as N. Luhmann, E. Pickering, K. Knorr-Cetina, B. Latour, M. Castells, L. Memford, W. Galston, who are the classics of rethinking the nature of technosocial phenomena similar to Internet networks. Thus, B. Latour mentioned “ontological turn” in research, he claims that this topic will answer the question what society is made of. (*Latour, 2003*). K. Knorr-Cetina develops approaches in the field of “post-social research” (Knorr-Cetina). Actor-network theory in this sense allows us to rethink the impact of technology on a person and his communication.

Even greater heuristic potential, in our opinion, has the concept of autopoiesis by N. Luhmann, which in turn was rethought by W. Maturana and F. Varela. Thus, in “Autopoiesis of Social Systems”, N. Luhmann writes that the essence of communication, which is recursively produced and reproduced by the communicative network cannot exist outside it (*Luhmann, 1990:54*). Let’s take a look at his theory in more detail.

2. The main part

Computer networks, video production of computer networks, design of microelectronics based on nanotechnology, agriculture based on modern biotechnology etc. as well as many other industries are the examples of the invasion of technogenic factors in our lives.

U. Maturana and F. Varela in the 1970s substantiated the concept in which it’s claimed that the tool that transforms systems into autonomous units is manifested through autopoiesis: “The system is autonomous,” they write, “if it establishes its own relevant laws. Autonomy is one of the most significant features of living beings ... now we imagine what defines living beings as unities – it is their autopoietic organization” (*Maturana, Varela, 1976*). They position the actors – users of the network, as tools of communication processes that support autopoiesis. Due to this, autopoiesis appears as a system that reproduces all its elementary parts on its own, with the help of an existing network of the same elements and thus separates itself from the external environment (*Luhmann, 2005*). This can happen in the form of life, in the form of consciousness or, in the case of a social system – in the form of communication.

In this sense, autopoiesis can be considered as a way to reproduce the system through itself (*Lavrenchuk, 2011*). Autopoietic architectonics is unique as its structural organization determines products themselves as a product, without division into manufacturer and product. Neurobiologists W. Maturana and F. Varela used the concept of “autopoietic machine” in describing the key property of a living system, its continuous regeneration and maintenance of its own identity (*Maturana, Varela, 1976*).

In this context, it is important to note that the development of microsial communities, with all the diversity of their functioning, is subject to the laws of development of large social groups of cyberspace. Whereas the function of form can be performed only by such factors that have the property to create certain dependencies under the influence of which the meaningful processes can develop. And the boundaries of the social system of virtual network communities create this area.

Thus, social networks, which autopoietically constitute themselves by distinguishing between medium and form, create differentiations that generate communication. Accordingly, the autopoietic nature of social networks is expressed in the fact that these systems themselves are able to establish and change their elements through relational processes and reproduction of social networks is not a repetition of a previously existing organization, but the constant reproduction of new elements associated with existing ones.

As social network researcher E. Lavrenchuk writes, “the mechanistic comparison of different communities or technological solutions are used by these communities to implement communication processes and it cannot give a real picture of social relations in virtual network communities, because these communities don’t just coexist and use certain technologies but are intertwined with lots of social connections. Cyberspace itself is transformed: new information resources appear and old ones disappear, accordingly, virtual network communities appear and cease to exist, information flows change their direction, new algorithms and techniques of information processing and transmission are created” (*Lavrenchuk, 2011:34*).

In social networks, each communication that is generated is followed by another non-identical communication, but it corresponds to the general communicative code of the system, its content and is always defined in advance, before the communication takes place. We agree that a system that has only one repetitive communication would lose its meaning: it would cease to be a system due to its lack of complexity. That is why, in our opinion, their autopoiesis does not presuppose the reproducibility of any specific (predetermined) reasons and conditions for the constitution of systems.

In this context, it is important to mention that all researchers of the Web in connection with the constant development of the Internet note the factor of formation of new types and algorithms of communicative behavior. Almost unanimously, they note the fact that the Web is mostly dominated by horizontal links and there are no time limits as well as territorial and hierarchical boundaries. On the Internet, the conditions that are necessary for communication can be reproduced without any reference to hierarchical “top”. This is primarily due to the fact that the development of social structures in the Network includes the ability to restructure the hierarchy of communication depending on the increasing interest of the user. This interest is growing in unpredictable media space, which is constantly expanding. The possibilities of operating information in such a system are not only free of censorship, as noted, but they are practically unrestricted, except the users’ ability to dispose of their own freedom. In the same row there are new conditions for the accumulation and evaluation of information; possibility to separate the processes of communication and perception; erasure of almost all spatial, status and property restrictions within the communication, etc.

Possession of information, ultimately turns into knowledge, not property, becomes a determining factor in social differentiation. The division into “rich” and “poor” acquires a fundamentally new character: the privileged layer and new “poor” uninformed layer. The center of social conflicts is moving from the economic sphere to the sphere of culture. The result of the struggle and resolution of conflicts is the development of new and fading of old social institutions. “Intelligent” technology becomes an infrastructure of the information society. It

is gradually replacing the old technology – “mechanical”. Social organization and information technology form a “symbiosis”. And with this fact society enters the “technotronic era”.

Thus, the communications that take place in the Web have the necessary complexity – endless options for their extensions. However, the Internet, as a system that has established closed relationship with the environment, organizes the reduction through its mechanisms, reducing complexity to the possibilities that ensure its functioning. (*Lavrenchuk, 2011*).

In particular, this mechanism is a double contingent, which, on the one side, demonstrates “dependence on” (contingenton), i.e. produces the orientation of communications to a common communicative code, on the other side, it retains the possibility of genesis of the other, as a signifier of denial of impossibility and conditioned necessity. In turn, the user chooses, on the one hand, the operation (communication) that is adjacent to the past operations (communications), on the other hand, he discovers in himself and through himself on the Internet some new virtual spaces, worlds. To analyze the Internet as an environment that generates a unique communication culture, it is necessary to identify the fundamentals, a kind of distinction on which this structure is built, namely: information databases, communication systems and search engines.

That’s why social networks act not only as self-referential, but also as autopoietic systems. To analyze the Internet as an environment that generates a unique communicative culture, it is necessary to identify the fundamentals, a kind of distinction on which this structure is built, namely: information databases, communication systems and search engines (*Lavrenchuk, 2011*). Social networks, being structural elements of the Internet, include components of all three denominated bases. In turn, the communication component of social networks is defined by E. Lavrenchuk as the main one, because historically electronic networks have developed from communication platforms that reproduce human connections with the help of computer technology.

Arguing the latter statement, he emphasizes that the development of network Internet structures is similar in type to the behavior of open systems described in synergetics, where except system openness there are two more features – nonlinearity of the system and its distance from equilibrium. Thus, such communications are autopoietic, i.e. self-reproducing (*Lavrenchuk, 2011*). Each communication generates information, which in turn generates new communications. Accordingly, the network as a whole generates itself, so it is autopoietic. Repeated through a multitude of feedbacks, communications generate a common system of beliefs, explanations, and values that is supported by subsequent communications. Through such a general information context, the subjects express their identities – suchwise the network builds its own boundaries. But this is not a physical boundary, like a cell membrane, but a completely different one, which determines the specifics of the diffusion of information. Thus, the process of communication itself is of paramount importance for the system, as it is the basis of its distinction from the external environment. Thus, the operability of information on the Internet dominates over causality (*Lavrenchuk, 2011*). It should be mentioned that this behavior of the system was described by J.-F. Lyotard in *The State of Postmodernism*. J.-F. Lyotard stated that legitimacy is formalized through productivity: “Productivity is self-legitimizing, as is apparently the case with a system that is adjusted to optimize its results”. (*Lyotard, 2011*).

3. Conclusion

The Internet is a set of communications organized through data transmission. The Internet uses its own descriptions to determine the status of operations, which, in turn, are the basis

for further operations. Thus, at present, productivity growth and its self-legitimation go through the production, storage, availability and operability of information. Based on the above, we can define the Internet as an operationally closed structure that has the accumulative property of completely different systems (social and technological), has its own border, as well as an autopoietic device that starts the process of self-reproduction. In this sense, autopoiesis is an important concept, in our view, as it allows us to identify the essential properties of the growing Internet space. The process of autopoiesis is manifested not only in self-reproduction, but also in separation from the environment. Systems with autopoietic organization reproduce themselves. Speaking of the latter and summarizing our analysis, it should be noted that cyberculture operates on the principle of autopoiesis, which finds expression as a rhizome, as hypertext. These multiple layers make cyberculture unique, and communication processes in it specific.

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THE LEGAL AND REGULATORY FRAMEWORK FOR SECURING OBLIGATIONS IN CREDIT GRANTING

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Summary

The aim of the article is to cover the theoretical aspects, legal and regulatory principles and development of ways to improve the legal and regulatory framework for securing obligations in the field of legal relations on credit granting. The study was conducted using the method of a systematic approach, which allowed to classify the views of the authors, to systematize the legal and regulatory framework, the method of unification, by application of which the proposals to address legislative shortcomings have been developed. The existence of problems in determining the legal status of objects of credit obligations of economic entities has been established. It is determined that in scientific works there is no universal approach to the composition and legal status of these objects, nor do they indicate the problems of current legislation in this field. It is revealed that the economic, civil legislation of Ukraine does not contain a complete definition of the composition of these securities. The problems of lack of legislative regulation of the problem of obligation and the procedure for assessing the state of the economic management, financial and economic condition, forecasting the risks of enforcement of loan obligations both from the loan providers subject to sponsors, guarantors and the latter in relation to borrowers, have been established. The availability of such problems in the field of normative and legal regulation in the USA, Poland and Ukraine has been proven, proposals for improving the provisions of the Ukrainian legislation in this area have been substantiated and formulated.

Keywords: loan providers, borrowers, enforcement of loan obligations, guarantees, securities.

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1. Introduction

The problem of protection of loan capital under conditions of the new global and national risks that affect the trustworthiness of borrowers requires the legislator to develop effective legal tools that would ensure compliance with obligations in the field of credit granting. Improvement of the legislative mechanisms for determining the security of credit obligations is becoming an urgent task and a condition for successful development of economic relations. The current state of legal regulation of this issue is not effective enough, that leads to a number of problems in credit relations, dispute resolution between economic entities at the judicial and prejudicial level. Lack of clear systematization of types, definition of regulation of the specified objects of credit legal relations is a peculiar problem both for domestic, and for foreign experience. In the view of the aforesaid, we believe that the study of this issue is currently topical, and emphasis of problems and ways to solve them in this field will increase the level of legal regulation.

2. Status and problems of normative legal regulation of securing obligations in the field of credit granting relations

Issues of normative legal regulation of securing obligations in the sphere of legal relations on credit granting in separate directions are covered in the provisions of a scientific legal thought. In particular, in the scientific works of A. Moroz (*Moroz, 2002:25*), Yu. Moisieiev, Yu. Uralova (*Moisieiev, Uralova, 2019: 174*), O. Karasava (*Karasava, 2015*), S. Mirza, K. Kachalko Myrza, Kachalko, 2016) the guarantees, being a type of collateral for credit obligations, are considered, but availability of problems of normative legal regulation of their legal status and subtypes is not indicated. In the study of O. Hromova (*Hromova, 2015*) all possible types of these objects (guarantees, pledges, securities and penalties) are identified, but it is indicated that there are problems of legal regulation only in relation to penalties. Provisions of a scientific work of V. Kudriavtsev (*Kudriavtsev, 2016*) contain a classification of types of credit obligations, determined depending on the signs of securing (addressed) and the lack of legislative definition (not addressed), but the author does not indicate the problems of legal regulation of types, legal status of such objects. Although at the present stage there is a certain amount of scientific research, sources of case law and regulatory framework in this field, there is a necessity to identify a full range of problems and develop directions for their solution.

The content of the economic and civil legislation of Ukraine does not contain a clear composition, does not determine the legal status of securities for credit obligations of economic entities. Let's define the basic legal and regulatory principles established by the Ukrainian legislator in relation to this issue.

The provisions of the Commercial Code of Ukraine establish the following list of securities for credit obligations of economic entities, in particular: guarantees from solvent economic entities; sureties of other banks; security, property owned by borrowers; other types of securities (paragraph 2 of Article 346 of the Civil Code of Ukraine). It should be noted that the Civil Code of Ukraine does not allocate a complete list of securities for credit obligations of economic entities (between borrowers (economic entities) and loan providers (banking institutions and other economic entities). Namely, economic legislation emphasizes that a guarantee as a type of security for credit obligations can be provided only by banking institutions (paragraph 2 of Article 346 of the Civil Code of Ukraine), ie banks act as guarantors, and, accordingly, the object of credit relations is only a guarantee provided by such economic entities. Scholars studying the guarantee as an object of credit relations (*A. Moroz (2002: 25)*, *Yu. Moisieiev, Yu. Uralova (Moisieiev, Uralova, 2019: 174)*, *O. Karasava (Karasava, 2015)*) point to this provision of the legislation without subjecting it to discussion. The scientific works do not put forward views on the incomplete composition of the subjects of credit relations, that are the guarantors, and it is not stated that the composition of objects (types of guarantees) in this area is limited. Herewith, it is established in the paragraph 4 of Article 67 of the Civil Code that state-owned enterprises, including companies (excluding banking institutions), the authorized capital of which is fifty or more percent of shares (units or shares) owned by the state, and who perform the specified economic activity under the conditions of its coordination with the corresponding central authorities of the executive level can act as security or guarantors of credit obligations. It is important to note that another type of guarantee provided by the Commercial Code of Ukraine refers to those provided by the state-owned enterprises. In our opinion, this choice of the legislator is not clear enough, since the state form of ownership is not a sign of trustworthiness and ability to exercise the security of credit obligations. Accordingly, we state that the provisions of the commercial legislation of Ukraine on this issue are inconsistent. As evidenced by the content

of civil law (paragraph 3 of Article 553 of the Civil Code of Ukraine), several or one person can act as guarantors. That is, within the Civil Code of Ukraine, the legislator does not set out a comprehensive definition of such entities, does not determine their legal status, but also does not impose restrictions on the form of ownership, types of economic activity. At the same time, the civil legislation contains a more complete composition of subjects, and, accordingly, the objects of guarantees, which are a part of the security of credit obligations of economic entities. Based on the provisions of the Civil Code of Ukraine, we state that the civil legislation of Ukraine stipulates that the guarantees of securities for credit obligations include all types of guarantees provided to persons with any legal status and form of ownership.

The provisions of the Civil Code of Ukraine contain a certain composition of security for fulfillment of obligations (Chapter 49), but do not specify those that may relate to the credit relations of economic entities. In view of the above, we believe that the main objects in this area at the general level are those provided by the Commercial Code of Ukraine, in particular, guarantees, sureties, pledges of property of borrowers, other types of guarantees. It should be noted that the civil law puts forward a certain composition of types of guarantees as a type of security for credit obligations. Namely, the provisions of the Civil Code of Ukraine (paragraph 1 of Article 560), compared to the Commercial Code of Ukraine, allocated an expanded composition of credit entities that can act as guarantors, including, in particular: banking institutions, insurance companies and other financial institutions. Therefore, civil law imposes certain restrictions on the legal status of guarantors, which is not defined in the content of the Commercial Code of Ukraine. Based on the subject composition submitted by the Civil Code of Ukraine, we determine that the types of guarantees that can act as collateral for credit obligations are as follows: guarantees provided by banking institutions; guarantees provided by insurance companies; guarantees provided by other financial institutions.

It is established that within the provisions of the Supreme Court of Ukraine set out in its Letter dated February 01, 2015 (*Site LIGA.net, 2015*), it is determined that any legal entities and individuals whose competences and property status will not raise doubts among loan providers can act as guarantors. According to the research materials, this approach is followed by all banking institutions, courts and loan providers in the process of assessing the legal status of guarantors and warrantors. In view of the above, we assume that the supreme judicial body provides for the existence of sureties, guarantees provided by legal entities and individuals who have the required level of trustworthiness.

Consequently, we state that at the current stage of legislative security there is no clear and comprehensive composition of the security objects for fulfillment of credit obligations of economic entities. This affects different approaches to judicial and prejudicial settlement of commercial disputes in this area.

The study of legal regulation of this issue in foreign practice shows as follows.

The provisions of the US Commercial Code (Article 2509) contain the security objects for fulfillment of credit obligations of economic entities, these are, in particular, two types of guarantees. Namely: unsecured guarantees, which are accepted by loan providers under conditions of confidence in the financial stability of guarantors; secured guarantees, which are accepted by creditors in case the financial stability of the guarantor is doubtful, and are secured by the pledge of the guarantor's property. It should be noted that the US law provides for the possibility of maximum guarantee of credit obligations of economic entities at a level not exceeding 90% of the loan amount. According to researchers (*Flint, 2019; Semian, Taylor, 2019*), in the regulation of credit guarantees in the United States of America there are problems associated with the fact that although the US legislature has identified these objects of credit obligations

of economic entities, the requirements for assessment of trustworthiness of guarantors by loan providers and borrowers by both lenders and guarantors were not taken into account. Guarantors are assessed on the basis of reports and audit reports, assessment of borrowers is performed in a similar way. Accordingly, loan providers do not perform an independent assessment of guarantors and borrowers, this also applies to guarantors, who are guided by their reports and audit reports when concluding guarantee agreements with borrowers. Taking the above into account, the trends of recent years indicate that this approach of the legislator does not protect the loan providers, the borrowers face a crisis situation. We can mention the problem of the US legislation regarding determination of the need for mandatory financial monitoring of guarantors and borrowers before concluding credit agreements and contracts of guarantee.

The Polish legislation provides for the functioning of guarantees and securities as security objects for fulfillment of credit obligations of economic entities (Article 881 of the Civil Code of Poland (*Tracz, 2019*)). However, guarantees are the most common objects in this field, there is no use of guarantees at the level of different categories of credit operations. Article 881 of the Civil Code of Poland provides that the guarantors, unless otherwise provided by the agreement, act as joint subjects of legal relations for credit granting in Poland. It is determined that their liability as subjects of these legal relations is provided in the amount of the guarantee. A similar status of the stated participants is provided in the content of the Law of Poland "Banking Law". Via example of the analysis of one of the numerous lawsuits in this area, we identify the problems of lack of reference in the provisions of the Polish law not to the need for self-assessment by creditors of trustworthiness of borrowers with whom a contract of guarantee is concluded. As an example, the decision of the Court of Appeal of Krakow city dated March 6, 2019 No. I AGa 313/18 (*Moment, 2019*) in the case of a lawsuit by the loan provider (banking institution) to prosecute the guarantor related to the claim of the lender repayment of the latter as the entire amount of debt on the loan at interest on it, and the amount of penalties for late payment of credit debt by the borrower. It was revealed that the borrower was a network of pharmacies, which received a long-term loan from the bank on the basis of a guarantee, but six months later lost its trustworthiness and violated the bankruptcy procedure. During the first court appeal the loan provider could not prove that the guarantor should be liable for the principal debt, penalties for late payment of interest. Therefore, his second appeal to the Krakow Court of Appeal provided for a similar subject-matter of the legal claim. Based on the results of consideration of this case, the abovementioned judicial body resolved the following, in particular:

- that the liability of the guarantor (defendant) for this court appeal is equal to the amount of the guarantee, which is established both in the contract of guarantee and in the loan agreement. The amount of this guarantee is 80% of the principal debt of the loan;
- the person who is the guarantor (defendant) has assumed the specified amount of liability, and does not deny the coverage of debt on the loan in the amount of 80%, while objecting to the payment of other 20% of the loan, interest on the loan, penalties for interest on the loan;
- oblige the guarantor (defendant) to pay the loan provider (banking institution) the specified amount of debt within 30 days as from the date of this court decision;
- the defendant party and the claimant party made significant mistakes in the process of assessing the trustworthiness of the borrower (*Apteka Spółka z o.o. and K.*). The defendant engaged an external audit (an audit company that constantly checked the financial and economic condition of the borrower), on the basis of the audit report, a decision to provide a guarantee was made. The loan provider did not conduct an independent assessment of the borrower's trustworthiness (*Apteka Spółka z o.o. and K.*) due to the fact that the guarantor submitted together with the contract of guarantee an audit report prepared by an independent audit

company. Occurrence of crisis phenomena was not determined by the auditors six months prior, which calls into question the quality of such an assessment of trustworthiness;

– complaint of the claimant (banking institution) about bringing the defendant (guarantor) to legal responsibility regarding the payment of the full amount of the loan, interest and penalties for them is rejected.

Respectively, in addition to recognizing the guarantor's legal liability under the contract of guarantee and the loan agreement (the latter defines the same), this, in particular, is 80% of the loan arrears, rejected the claimant's claim to recover from the guarantor amounts not provided for in the contract provisions. The provisions of this judgment state that the loan provider, as well as the guarantor did not provide an effective assessment of the borrower's trustworthiness, which entailed financial losses for the guarantor, necessity to solve the problem of repaying another amount of debt (20% loan amount, loan interest and interest penalties) for the loan provider by means of judicial procedure. It shall be noted that the issue of ineffective trustworthiness assessment is relevant for both Poland and Ukraine. Namely, there are many lawsuits related to claims to bring guarantors (securities) to repay debts under credit agreements, if the latter cannot be secured by borrowers due to loss of paying capacity. The content of court cases indicates the loss of trustworthiness and its insufficiently effective assessment at the stages of legal relations of concluding a contract of guarantee (or guarantees), credit agreements. Let's analyze the main directions and content of such court decisions in Ukraine, adopted after January 1, 2019, namely:

– Decision in case 904/1049/20 dated October 06, 2020, adopted by the Commercial Court of Dnipropetrovsk region, which considers the claim of the claimant (banking institution) to hold the guarantor (legal entity) liable on the debt obligations of the borrower (legal entity) due to violation of the last order of repayment of non-revolving loan facility, threat of loss of trustworthiness, lack of consent of the guarantor to pay all costs of the loan provider related to debt repayment (*Rishennia u spravi No. 904/1049/20, 2020*). Within the abovementioned court decision, the judicial body recognized the need for the guarantor to repay the full amount of the borrower's debt to the loan provider, as otherwise was not determined by the contract of guarantee, the loan agreement. Accordingly, the guarantor is responsible for liquidation of the debt of the borrower through his own approach to assessing the trustworthiness of the borrower;

– Decision in case 924/1288/19 dated April 14, 2020, adopted by the Commercial Court of Khmelnytskyi region, which provides for examination of the claimant's (banking institution) requirements for holding the guarantor liable for the debt obligations of the borrower (legal entity). This lawsuit took place due to the recent violation of the terms of liquidation of credit obligations, doubts from the loan provider on the trustworthiness of the borrower on the date of repayment of the loan, interest (*Rishennia u spravi No. 924/1288/19, 2020*). The judicial body made assumptions on insufficiently effective assessment of the borrower's trustworthiness by the guarantor and the loan provider (banking institution), and also made a decision to satisfy the borrower's claims in full. Therefore, the guarantor, due to the lack of reliable verification (only the assessment of the audit opinion submitted by the audit organization), suffered significant financial losses;

– Decision in case 908/1054/20 dated August 20, 2020, adopted by the Commercial Court of Zaporizhzhia region, which analyzed the claims of the claimant (banking institution) to hold the guarantor jointly with the borrower liable on the debt obligations of the latter. This lawsuit arose due to the violation by the borrower of the terms of liquidation of credit obligations, accrual of causes to assume by the loan provider that the borrower has reduced the level of trustworthiness (*Rishennia u spravi No. 908/1054/20, 2020*). The content of this

court decision indicates the need for a thorough analysis by the guarantor of the borrower's trustworthiness, which was not carried out, and judging by the circumstances of the case, the decision on guarantee was made based on the results of independent analysis of financial statements. The claimant's complaint was approved, and a decision was rendered to satisfy the latter's claims in full by bringing the guarantor and the borrower to joint liability. Taking the above-mentioned into consideration, as well as in case of previous lawsuits, the guarantor suffered significant financial losses due to a correct assessment of the borrower's trustworthiness, respectively, these relationships were ineffective.

We can state that provisions of the legislation of Poland, the USA and Ukraine do not emphasize the necessity to assess the trustworthiness of the borrower by the guarantor, the loan provider, the conditions of such inspections, procedure and subjectivity of their payment are not defined.

3. Ways to improve the legal and regulatory sphere in the area being studied

In our opinion, the provisions of economic and civil legislation of Ukraine shall use a unified approach to determining the legal status of guarantors and warrantors. There is also a need to eliminate the indication in paragraph 4 of Article 67 of the Civil Code that state enterprises, including companies (excluding banking institutions), the authorized capital of which is fifty percent or more of shares (units or shares) owned by the state, and which provide such services subject to the approval of the relevant central executive authorities, can act as guarantors and warrantors of security for debt obligations of borrowers. This is due to the fact that this remark does not fully comply with the content of the Civil Code of Ukraine on the legal status of guarantors and warrantors on security for debt obligations of borrowers, differs from interpretation of the Supreme Court of Ukraine, all courts, banking institutions on the legal status of these persons. It should be assumed that argumentation of the Ukrainian legislation in the provisions of the Commercial Code of Ukraine on classification of warrantors, guarantors of state (semi-state) enterprises, the indication that they should not be banks, and the need to coordinate the provision of guarantees, warranties, in coordination with the central authorities, indicates a reference point for use the use of non-market methods of regulation, which are completely unjustified, differ from other laws and regulations.

In view of the aforesaid, we offer to change the content of paragraph 4 of Article 67 of the Civil Code of Ukraine and determine the legal status of the persons under study (guarantors and warrantors) as follows:

... Enterprises of various forms of ownership, entrepreneurs can perform raising debt funds (long-term and short-term), on contractual terms (for a fee) to act as warrantors, guarantors for security for debt obligations of borrowers in the case of proper trustworthiness, business reputation to provide services of this category. The procedure for providing guarantees, sureties from such persons provides for them to check the trustworthiness of borrowers to return credit to loan providers. The specified examination can be conducted both by internal forces of warrantors, guarantors, and by means of involvement of external audit. The cost of assessing trustworthiness is borne by borrowers who pay for its implementation before conclusion of contractual terms with warrantors, guarantors. If, based on the results of assessment, the latter do not make a decision on the provision of guarantees, sureties, the costs of trustworthiness assessment are not refunded to the borrowers.

This wording provides for the possibility of economic entities to raise loans, as it is the right of any enterprise, individual entrepreneurs and is defined in the text of the current legal

act (paragraph 4 of Article 67 of the Commercial Code of Ukraine). This right has remained unchanged in the provisions of the Commercial Code of Ukraine, but the composition of persons who can use it has been expanded (enterprises of all forms of ownership, individual entrepreneurs have been added).

The emphasis in this definition is that both legal entities and natural persons-entrepreneurs can act as warrantors and guarantors, which results from the fact that the latter are also subjects of economic activity, and that such a possibility is provided by the legal position of the Supreme Court of Ukraine. (*Letter to clarify this issue dated February 01, 2015 (Site LIGA.net, 2015)*), the content of the provisions of the Civil Code of Ukraine on the legal status of guarantors (paragraph 3 of Article 553 of the Civil Code of Ukraine). In our opinion, the guarantors of security for debt obligations of borrowers can also be natural persons-entrepreneurs who have the appropriate level of trustworthiness, business reputation for provision of such services. It should be noted that the reference to the fact that the provision of guarantees, sureties is performed on contractual terms (for a fee) provides additional guarantee of loan reimbursement for loan providers, since free provision of such services may indicate the possibility of collusion of warrantors, guarantors and borrowers to obtain the loan funds. It should be noted that the provisions of the Commercial Code of Ukraine do not provide for the use of payment to warrantors, guarantors for their services, respectively, this can be interpreted as the possibility of provision of free services of this category and provision of paid services in this area (on contractual terms). But the latter is also, in our opinion, an additional guarantee for warrantors, guarantors in the event the borrowers cannot discharge their debts for this type of service. In particular, an economic dispute over compensation may be resolved in court, if the law provides for the payment of such services and the contract for the provision of guarantees specifies the amount of payment. It should be noted that we provide a systematic approach to the trustworthiness of borrowers before any contractual relations with warrantors, guarantors. This is aimed at protecting the financial interests of the latter, we also do not determine the possibility of being guided by the results of the assessment of the financial and economic condition of borrowers provided by them independently. Even if they submit audit reports provided by independent auditors on the date of receipt of sureties, guarantees, loans, warrantors and guarantors shall independently conduct an assessment of trustworthiness. At the same time, the reports of independent auditors can be the sources of such analysis, if they contain the necessary comprehensive information.

An important area of improving regulation in this area is the legislative consolidation of positions on obligation and procedure for assessing the state of the economy management, financial and economic condition, forecasting the risks of securing credit obligations by loan providers to warrantors, guarantors and on behalf of the latter regarding borrowers. Adherence to these procedures will eliminate the problems of non-performance of credit obligations for both loan providers and for security for fulfillment of credit obligations. Regarding the amendments to the Commercial Code of Ukraine, the following is offered: to set forth the provision of this legal document regarding the legal status of guarantees and loans, given in paragraph 2 of Article 346 of the Commercial Code of Ukraine taking into account the submitted offers. Namely:

In order to reduce the level of risk, the loan provider may provide loans to borrowers in case the latter provide the pledge of property, guarantees, sureties provided by any legal entities and individuals whose competences and property status will not be in doubt. To assess the trustworthiness, the loan providers shall assess the state of the economy management, financial and economic condition and forecast the risks of non-repayment of credit funds at a preliminary

stage. Guarantees, sureties are provided by warrantors, guarantors on a fee basis after the establishment of the trustworthiness of borrowers, the cost of which shall be borne by the borrower.

4. Conclusions

The theoretical aspects, legal and regulatory principles and development of ways to improve the legal and regulatory framework for securing obligations in the field of legal relations on credit granting have been covered. The study of theoretical provisions, legal and regulatory framework has shown the availability of problems in determining the legal status of the objects of credit obligations of economic entities. It is determined that the scientific works do not contain a universal approach to composition and legal status of these objects, nor do they indicate the problems of current legislation in this field. According to the results of the analysis of the commercial and civil legislation of Ukraine, the existence of an incomplete definition of the composition of these securities was revealed, it was proved that this is due to gaps in determining the composition of the subjects of these securities. Taking into the account the stated range of problems, it is offered to eliminate the inconsistency of the legislation provisions at the level of the Civil Code of Ukraine and Commercial Code of Ukraine based on the content of the recommendations of the Supreme Court of Ukraine. Problems of lack of legislative regulation of the problem of obligation and the procedure for assessing the state of the economic management, financial and economic condition, forecasting the risks of enforcement of loan obligations both from the loan providers subject to warrantors, guarantors and the latter in relation to borrowers, have been established. The availability of such problems in the field of legal regulation in the USA, Poland and Ukraine has been proven. Considering the urgency of the issue, proposals for improving the provisions of the Ukrainian legislation in this area have been substantiated and formulated.

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HEALTH, ENVIRONMENT, DEVELOPMENT**DIAGNOSTIC AND PROGNOSTIC VALUE
OF MEASURING SEROTONIN IN MALIGNANT TUMOR ANEMIA
IN PATIENT WITH COLORECTAL CANCER****Artem Andriiaka**

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Summary

Colorectal cancer is an extremely urgent issue in modern medicine. This disease is often complicated by anemia, which has specific pathogenetic mechanisms of development and forms a mutual burden syndrome of diseases in cancer patients. The anemic syndrome is accompanied by the development of tissue hypoxia, which in turn activates the processes of oxidative stress and leads to increased release of biologically active compounds, in particular, biogenic amines. One of these is serotonin. Moderate concentrations of serotonin cause dilation of arterioles, reduction of myositis in venule walls, accompanied by venous stasis. Its high concentrations cause spasm of the arterioles, which exacerbates tissue hypoxia. We have examined 153 patients with colorectal cancer without anemia, 75 patients with colorectal cancer complicated by malignant tumor anemia, and 53 patients with iron deficiency anemia. The content of plasma free serotonin fractions was determined by the fluorometric method proposed by Mikhailychenko, B. V., Vydyborets, S. V. (1999). The patients with iron deficiency anemia and malignant tumor anemia have shown to have a significant increase in plasma free serotonin, compared with the control group and the group of patients with colorectal cancer without anemia. Plasma free serotonin was increasing together with the severity of anemia. The article discusses the feasibility of using the content of plasma free serotonin, as an option, to assess the state of compensation of secondary metabolic disorders in iron deficiency anemia and malignant tumor anemia during treatment and its possible differential diagnostic value.

Keywords: anemic syndrome, hypoxia, biogenic amines, blood plasma.

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1. Introduction

Every year, more than 6 million people are diagnosed with and more than 4 million people die from cancer all over the world, which is approximately 10% of the total mortality. The incidence of cancer in Ukraine shows a gradual increase, with the number of newly diagnosed

patients 304 – 308 per 100 thousand people (Fedorenko et al., 2019). According to the official data of the Ministry of Health of Ukraine, 25% of patients are diagnosed with stage IV disease already during the initial visit, which in most cases is the reason for denying specialized care and providing them with symptomatic treatment. Serotonin (SN) as a pain mediator plays an important role in chronic pain syndrome in cancer patients. The accumulation of serotonin is the first link in a long chain of physiological and biochemical processes that accompany anemic hypoxia (Moore et al., 2020; Shchur, 2014). SN is a biologically active compound released by mast cells as a response to hypoxic conditions. According to modern ideas, serotonin influences the functions of various organs and tissues by interacting with specific serotonergic receptors, which refer to the membrane chemoreceptors. Interaction of serotonin with specific receptors is accompanied by activation of adenylate cyclase, which leads to increased formation of cyclic adenosine monophosphate or guanosine monophosphate. SN is quite common in nature: in plants, mollusks and other invertebrates, insects, tissues of all vertebrates. In humans, a significant amount of SN is contained in enterochromaffin cells of the intestine (0,9 – 8,6 $\mu\text{g/g}$), which is why it is called enteramine (Cerqueira, Hussni, & Yoshida, 2005). Certain amounts of SN are contained in platelets of humans and warm-blooded animals ($2,4 \pm 0,5 \mu\text{mol/g}$ protein). The concentration of whole blood SN, according to various authors, ranges from 0,05 to 0,2 mg/l, or 0,28-1,14 $\mu\text{mol/l}$. SN also accumulates in mast cells of the skin, lung, digestive tract, kidney, spleen tissue, central nervous system (CNS). In the CNS, its concentration differs in different sections: the highest is found in the hypothalamus and midbrain, and the lowest – in the thalamus, hippocampus, cerebellum and gray matter of the spinal cord. A large amount (22,8 $\mu\text{g/g}$) of SN has been found in the pineal gland, with the highest concentrations during the day and the lowest at night (Gaidukova, Tkachenko, & Bublij, 2018). Cells, which are able to capture and decarboxylate amine precursors synthesize and accumulate SN, belong to the system of APUD (Amine precursor uptake and decarboxylation) cells (Jang, Kwon, & Chang, 2015; Shchur, 2014). One of the biological mechanisms of maintaining the optimal level of physiologically active SN in the body is serotoninopexy. The essence of this phenomenon is the binding of free SN by plasma proteins and some cells. Bound SN loses its physiological activity. The main SF binding plasma proteins are albumins. One molecule of albumin can bind 11 molecules of SN. Mast cells, lung tissue cells, erythrocytes, platelets, hepatocytes also can bind SN, but the nature and mechanisms of this process are different from binding to proteins. The intensity of SN binding is quantified by the value of the serotonin-peptic index (SPI). Normally, according to the spectrophotometric method, it is 30-40%. According to modern ideas, SN influences the functions of various organs and tissues by interacting with specific serotonergic receptors, which refer to the membrane chemoreceptors. Using pharmacological techniques and SN antagonists, three types of SN-sensitive cellular receptors have been identified. They are referred to as D-, M-, and T-serotonin-energy receptors (Gaidukova, Tkachenko, & Bublij, 2018). D-serotonergic receptors, blocked by lysergic acid diethylamide and dibenziline, are localized mainly in the smooth muscles of the internal organs. The interaction of SN with D-receptors is accompanied by a contraction of smooth muscle. M-serotonergic receptors, blockable by morphine and some other substances, are located mainly in the autonomic ganglia. By acting on these receptors, SN has a gangliostimulating effect. T-serotonergic receptors are blocked by tipindole. They are located in the cardiopulmonary reflex zone and serve as conductors for SN induced coronary and pulmonary chemoreflexes. D- and M-receptors are found in the CNS; there is an opinion about the presence of T-serotonic receptors in the brain (Back et al., 2019, Belagaje, 2017). Interaction of SN with specific receptors is accompanied by activation of adenylate cyclase, which leads to increased formation of cyclic adenosine monophosphate or guanosine monophosphate.

Under the influence of various activators, i.e. adenosine diphosphate, platelet activating factor, thrombin, collagen, etc., platelets and chromaffin cells secrete serotonin. Moderate concentrations of serotonin cause dilation of arterioles, reduction of myositis in venule walls, accompanied by venous stasis. Its high concentrations cause spasm of the arterioles, which exacerbates tissue hypoxia. Despite the important role of serotonin in the pathogenesis of numerous pathological processes and diseases, its changes in the content in malignant tumor anemia stayed ignored by researchers, which, in turn, prompted us to the scientific research.

2. Material and methods

The objective of the research was biochemical studies on the content of free serotonin fraction in the peripheral blood plasma of healthy individuals with iron deficiency anemia and malignant tumor anemia in colorectal cancer to identify possible specific changes and use its content index in clinical and differential diagnostic practice.

To solve this problem, we conducted this clinical study at Kyiv Regional Oncology Center. The study involved 392 patients: 186 (47,45 %) women and 206 (52,55 %) men. The material for the study was blood plasma of 392 patients (58 men and 52 women), which included 53 patients (31 women and 22 men) with iron deficiency anemia examined; the latter were the first (I) observation group, and 392 patients (206 men and 186 women) with colorectal cancer, burdened with malignant tumor anemia, were the second (II) observation group. Among the patients of the second (II) observation group, 222 people (119 men and 103 women) had malignant colon tumors (ICD-10 International Classification of Diseases (ICD) – C. 18), 29 people (16 men and 13 women) had malignant rectosigmoid tumors (ICD-10 – C. 19),

138 people (82 men and 56 women) had malignant rectal tumors (ICD-10 – C. 20), and 3 patients (2 men and 1 woman) had malignant anal canal tumors (ICD-10 – C. 21). The age of the subjects ranged 22 to 79 years. The mean age of patients was $(63,3 \pm 1,2)$ years. The patients on admission had anemic syndrome. The presence of colorectal cancer stage II-IV according to Dukes (1956) and TNM was determined histochemically. All patients were examined before starting any treatment.

Iron deficiency anemia was verified on the basis of the characteristic clinical signs (signs of anemic hypoxia and sideropenic syndrome), the characteristic hematological pattern of peripheral blood and indicators of iron metabolism.

The severity of anemia was determined and distinguished according to the National Cancer Institute (USA) criteria: mild anemia – Hb 10-12 g/dl (Grade 1); moderate – Hb 8-10 g/dl (Grade 2); severe – Hb 6,5-8 g/dl (Grade 3); life-threatening – Hb <6,5 g/dl (Grade 4). Among patients with IDA, 19 people had mild severity, 15 – moderate, 11 – severe, and 8 – lifethreatening. Mild severity of malignant tumor anemia was diagnosed in 75 patients, moderate – in 14, severe – in 10, and life-threatening – in 6.

All studies were in compliance with the main provisions of the Council of Europe Convention on Human Rights and Biomedicine, World Medical Association Declaration of Helsinki on Ethical Principles for Medical Research with Human Participation (1964 with subsequent amendments, including version 2000), and Order of the Ministry of Health of Ukraine No. 690 dated 23.09.2009. All patients at admission underwent clinical, laboratory, instrumental and special examinations, they were consulted, if necessary, by related specialists. The examination and treatment of patients were in compliance with the World Medical Association Declaration of Helsinki (*Seoul, 2008*), and the relevant orders of the Ministry of Health of Ukraine (No. 281

from 01.11.2000, No. 355 from 25.09.2002, No. 356 from 22.05.2009 amended with the Order of the Ministry of Health of Ukraine No. 574 of 05.08.2009, No. 1118 of 21.12.2012).

The control group consisted of 50 healthy primary donors who had no history of oncological or chronic inflammatory diseases. All donors were examined at the "Blood Transfusion Station of the Southwestern Railway" State Institution following the requirements of the "Blood and blood components donor screening procedure", approved by the Order of the Ministry of Health of Ukraine No. 385 of 01.08.2005 "On infectious safety of blood and blood components donors".

Patients with colorectal cancer underwent a thorough histological examination; it considered the nature of the tumor margins with surrounding tissues, the severity of infiltration, the presence of tumor cells in blood vessels, the number of mitoses, including atypical. In addition to the above, cell elements of different degrees of maturity (8,9 %) were determined in tumors – low differentiated (LD), moderately differentiated (MD) (66,8 %), and highly differentiated (HD) (24,3 %) cells. The degree of malignancy and histological type of tumor were assessed according to generally accepted criteria.

The content of plasma free serotonin fraction was measured by the fluorimetric method proposed by (*Mikhailichenko & Vidyborets, 1999*). The study was conducted in the biologically active compound analytical laboratory of the Department of Forensic Medicine, Bogomolets National Medical University (Kyiv). The author and the supervisor sincerely thank the Head of the Department, Professor Mikhailichenko B. V. for methodological assistance in scientific research. The results of the studies were statistically processed by the variation methods with the calculation of the Student's t-test ($p < 0,05$).

3. Results of the study and discussion

The data analysis has found significantly lower hemoglobin concentrations in patients of groups II and III than in the control and group I ($p < 0,001$). In the control group, this parameter averaged $(143,82 \pm 4,60)$ g/l. At the same time, it was $(147,22 \pm 4,31)$ g/l in men, with individual fluctuations from 135 to 164 g/l, and $(131,06 \pm 3,77)$ g/l in women, with individual fluctuations from 125 to 147 g/l. Men had higher hemoglobin concentration than women ($p < 0,001$), while patients of groups II and III did not have significant differences in hemoglobin concentration by gender ($p > 0,05$). The average number of red blood cells in the control group was $(4,76 \pm 0,15) \times 10^{12}/l$: men had on average $(4,86 \pm 0,15) \times 10^{12}/l$, with individual fluctuations from $4,4$ to $5,0 \times 10^{12}/l$, and women – $(4,38 \pm 0,13) \times 10^{12}/l$, with individual fluctuations from $4,2$ to $4,7 \times 10^{12}/l$. The number of red blood cells in the control group was higher in men than in women ($p < 0,001$). At the same time, patients of groups II and III, did not have significant differences in the number of red blood cells by gender ($p > 0,05$). The average number of leukocytes in the control group was $(5,85 \pm 1,24) \times 10^9/l$ in men, with individual fluctuations from $3,9$ to $7,3 \times 10^9/l$, and $(5,83 \pm 1,32) \times 10^9/l$ in women, with individual fluctuations from $3,8$ to $8,3 \times 10^9/l$. This indicator had no significant differences either between the observation and control groups or by gender ($p > 0,05$). The average number of platelets in the control group was $(203,40 \pm 13,94) \times 10^9/l$. Men had on average $(204,38 \pm 15,23) \times 10^9/l$, with individual fluctuations from 180 to $230 \times 10^9/l$, and women – $(201,67 \pm 11,51) \times 10^9/l$, with individual fluctuations from 190 to $220 \times 10^9/l$. The comparative analysis showed higher levels in patients of groups II and III compared with controls ($p < 0,001$). This fact may confirm the idea of the presence of overt or covert bleeding in patients of groups II and III with compensatory enhancement of hematopoiesis in the myelocytic lineage, in particular, platelet cytopoiesis.

The average number of reticulocytes in the control group was $(0,88 \pm 0,05) \%$: $(0,87 \pm 0,05)$ in men, and $(0,88 \pm 0,04) \%$ in women. Their level was significantly lower in patients of group II than in the control group and groups I and III ($p < 0,001$), which, in our opinion, can be due to suppression of erythropoiesis in patients with MTA by humoral factors and intoxication syndrome.

General MTA in the control group was $(30,63 \pm 0,25)$ pg, with fluctuations from 27 to 33 pg. Women had on average $(29,40 \pm 0,42)$ pg, with individual fluctuations from 27 to 31 pg, and men – $(31,13 \pm 0,24)$ pg, with individual fluctuations from 28 to 33 pg. This group did not have significant differences in MSN levels by gender ($p > 0,05$). The comparative analysis showed lower levels in patients of groups II and III compared with the control ($p < 0,001$). This fact indicates the disorders of hemoglobin synthesis and iron deficiency in patients of groups II and III. It can be assumed that it develops in patients of group III due to chronic blood loss, while in patients of group II, apparently, due to high pro-inflammatory interleukins and hepcidin.

General MCV in the control group was $(93,41 \pm 0,91)$ fl, with fluctuations from 84 to 97 fl. Women had on average $(94,22 \pm 1,69)$ fl, with individual fluctuations from 89 to 97 fl, and men – $(92,29 \pm 1,01)$ fl, with individual fluctuations from 84 up to 96 fl. Group I had no significant differences in MCV, compared with the control ($p > 0,05$), while groups II and III showed a decrease in MCV ($p < 0,001$). General MCHC in the control group was $(34,38 \pm 0,23) \%$, with fluctuations from 33 to 35 %. Women had on average $(34,35 \pm 0,31) \%$, with individual fluctuations from 33 to 35 %, and men – $(34,41 \pm 0,41) \%$, with individual fluctuations from 33 up to 35 %. Group I had no significant differences in MCHC, compared with the control ($p > 0,05$). However, groups II and III showed a decrease in MCHC ($p < 0,001$), which indicates disorders of iron metabolism and the processes of erythropoiesis and hemoglobin synthesis. Shows that the content of serum iron (SI) in the control group, on average, was $(20,04 \pm 2,03) \mu\text{mol/l}$. Men had on average $(20,75 \pm 1,94) \mu\text{mol/l}$, with individual fluctuations from 17,30 to 24,60 $\mu\text{mol/l}$, and women – $(18,77 \pm 1,53) \mu\text{mol/l}$, with individual fluctuations from 16,40 to 21,30 $\mu\text{mol/l}$. The SI content in the control group was higher in men than in women ($p < 0,01$). The results of our study show a significant decrease in the content of SI in groups II and III ($p < 0,001$). The average total iron-binding capacity (TIBC) in the control group was $(57,25 \pm 2,49) \mu\text{mol/l}$: men had on average $(56,52 \pm 2,37) \mu\text{mol/l}$, with individual fluctuations from 52,05 to 61,03 $\mu\text{mol/l}$, and women – $(58,55 \pm 2,20) \mu\text{mol/l}$, with individual fluctuations from 54,87 to 62,05 $\mu\text{mol/l}$. TIBC in the control group was higher in women than in men ($p < 0,01$). Patients of groups II and III were found to have a significantly lower TIBC, which indicates iron metabolic disorders ($p < 0,001$). The average unsaturated iron-binding capacity (UIBC) in the control group was $(35,77 \pm 4,07) \mu\text{mol/l}$ in men, with individual fluctuations from 28,05 to 43,37 $\mu\text{mol/l}$, and $(39,78 \pm 3,53) \mu\text{mol/l}$ in women, with individual fluctuations from 34,18 to 45,65 $\mu\text{mol/l}$. In general, in the control group, the UIBC was $(37,21 \pm 4,31) \mu\text{mol/l}$: women had higher levels than men ($p < 0,01$). Patients of groups II and III were found to have a significantly higher UIBC, which indicates iron metabolic disorders ($p < 0,001$). The average transferrin saturation (TS) in the control group was $(35,18 \pm 4,90) \%$: men had on average $(36,88 \pm 4,74) \%$, with individual fluctuations from 28,60 to 46,10 %, and women – $(32,17 \pm 3,63) \%$, with individual fluctuations from 26,40 to 38,30 %. TS in the control group was higher in men than in women ($p < 0,01$). Patients of groups II and III were found to have a significantly lower TS, which indicates iron metabolic disorders ($p < 0,001$).

Average serum transferrin (TF) in the control group was $(3,23 \pm 0,10)$ g/l. Men had $(3,20 \pm 0,09)$ g/l, with individual fluctuations from 2,23 to 3,38 g/l, and women had

(3,28±0,09) g/l, with individual fluctuations from 2,24 to 3,42 g/l. The content of serum TF in the control group was higher in women than in men ($p<0,01$). Patients of groups II and III showed to have multidirectional changes in TF, compared with the control, while its level was significantly lower in patients of group II, and significantly higher in patients of group III ($p<0,001$). This nature of the changes indicates the TF synthesis and metabolic disorders due to tumor intoxication. Average serum ferritin (FN) in the control group was (24,91±2,14) µg/l in men, with individual fluctuations from 20,64 to 30,12 µg/l, and (19,19±1,41) µg/l, with individual fluctuations from 17,15 to 21,82 µg/l. Serum FN in the control group was higher in women than in men ($p<0,01$). Patients of groups II and III also showed to have multidirectional changes in FN, compared with the control, while its level was significantly higher in patients of group II, and significantly lower in patients of group III ($p<0,001$). This nature of the changes is due to the fact that FN is an acute phase protein, which level increases in response to tumor intoxication.

Table 1 shows data on the results of studies on plasma free serotonin in the subjects.

Table 1

Plasma free serotonin in the subjects (M±m), µg/l

Indicator	Groups			Level of significance (p)
	Control (n=50)	I (first), (n=53)	II (second), (n=392)	
Free serotonin, µg/l	0,47±0,21	0,53±0,27	0,57±0,24	$p_1 < 0,05$ $p_2 < 0,05$ $p_3 < 0,05$

Notes: p_1 – level of significance of the difference in patients of group I compared with the control group; p_2 – level of significance of the difference in patients of group II compared with the control group; p_3 – level of significance of the difference in patients of groups I and II.

As the above data show, serum free serotonin in groups I and II was significantly higher than in the control group ($p<0,05$). This indicator was significantly higher in patients of group II, which may indicate its synthesis, release, and inactivation disorders as a response to tumor intoxication and anemic hypoxia ($p<0,05$). It was quite natural for us to investigate the way the level of serum free serotonin changes in patients with malignant colon tumor with concomitant MTA, based on the severity of the anemic syndrome. Table 2 presents our data.

As Table 2 shows, patients with malignant colon tumors with concomitant MTA had an increase in their serum free serotonin in proportion to the severity of anemia. That is, the severity of life-threatening anemia in patients with malignant colon tumors with concomitant MTA is accompanied by the most significant increase in plasma free serotonin, which obviously reflects its metabolic peculiarities as a response to tumor intoxication and anemic hypoxia, and may indicate its synthesis, release, and inactivation disorders.

Adaptation and survival of the body depends on the integrity and preservation of regulatory systems within the whole organism and auto-regulatory mechanisms of individual organs. The whole organism has metabolic, humoral, and neurogenic auto-regulatory mechanisms of metabolic protection of each of the functioning organs (Back, 2019).

Table 2

Serum free serotonin in patients with malignant colon tumor with concomitant MTA, based on the severity of the anemic syndrome (M±m), µg/l

Groups (n)		Level of significance (p)
Control (n=50)	Malignant colon tumor with concomitant MTA (n=75)	
0,47±0,21	mild anemia (n=45) 0,48±0,28	p ₁ < 0,05 p ₂ > 0,05 p ₄ > 0,05 p ₅ < 0,05 p ₆ < 0,001
	moderate anemia (n=14) 0,51±0,24	p ₁ < 0,05 p ₂ < 0,05 p ₃ > 0,05 p ₅ < 0,05 p ₆ < 0,01
	severe anemia (n=10) 0,53±0,27	p ₁ < 0,05 p ₂ < 0,05 p ₃ < 0,05 p ₄ < 0,05 p ₆ < 0,01
	life-threatening anemia (n=6) 0,59±0,21	p ₁ < 0,01 p ₂ < 0,01 p ₃ < 0,05 p ₄ < 0,01 p ₅ < 0,01

Notes: p₁ – level of significance of the difference compared with the control group; p₂ – level of significance of the difference in patients of group II; p₃ – level of significance of the difference in patients with mild anemia; p₄ – level of significance of the difference in patients with moderate anemia; p₅ – level of significance of the difference in patients with severe anemia; p₆ – level of significance of the difference in patients with life-threatening anemia.

Neurohormones are essential for the regulation of adequate blood supply to vital organs. One of them is serotonin. Serotonin is phylogenetically the oldest biogenic amine, which plays a unique role in ensuring energy metabolism (*Yabut et al., 2019*). By the way, serotonin induces the first fetal heart contraction. Unlike classical hormones, serotonin is synthesized in various anatomical locations. Brain-synthesized serotonin is only near total serotonin in the human body, and 95 % is synthesized in peripheral organs, with the bulk of serotonin being produced by enterochromaffin cells in the gut (*El-Merahbi et al., 2015*). Interestingly, brain-synthesized serotonin acts as a neurotransmitter, while in the periphery it can act as a hormone, auto- and/or paracrine factor, and as a cellular signaling molecule. Peripheral serotonin does not cross the blood-brain barrier (*Watanabe et al., 2010*). The content of serotonin in peripheral tissues depends on both its local production and its free fraction in the blood. In peripheral blood, serotonin is absorbed and stored by platelets. In humans, brain-synthesized serotonin affects behavior, suppresses appetite, increases energy utilization by increasing the effect of the sympathetic nervous system on brown adipose tissue (*Oh et al., 2015*). Peripheral serotonin improves the absorption and storage of nutrients such as glucose and fatty acids, stimulates insulin secretion,

lithogenesis in liver and white adipose tissue, has a direct bearing on diseases such as metabolic syndrome, obesity, diabetes (Martin *et al.*, 2017). Serotonin as a neurotransmitter causes contraction of smooth muscles of the bronchi, intestines, arteries, increases the functional activity of platelets. By increasing vascular permeability, serotonin enhances the granulation of mast cells, and thus causes the release of histamine, which is central to stimulating the formation of new atherosclerotic plaques (Xu *et al.*, 2017).

Literature reports an increase in serotonin levels during tissue regeneration after myocardial infarction or ischemic stroke (Mauler, Bode, & Chang, 2015). There is evidence of genetic determinism regarding serotonin levels and the risk of myocardial infarction, ischemic stroke, or transient ischemic attack at high levels (Mortensen *et al.*, 2018). Many clinical studies and metaanalyses have confirmed the association of serotonin with the improvement of patients after ischemic stroke (Belagaje, 2017). As for ischemic changes in the arteries of the intestine, serotonin again comes to the fore. This biogenic amine, most of which is produced in the intestine, regulates motility, increases peristalsis and secretory activity. However, in atherosclerotic vascular lesions, vasoconstrictive responses in the mesenteric bloodstream are enhanced by stimulation of serotonergic and alpha-adrenergic receptors (Lopez *et al.*, 1989).

A number of studies on intestinal ischemia have reported a significant increase in plasma serotonin due to its high release by damaged intestinal cells (Cerqueira, Hussni, & Yoshida, 2005). Ischemic changes in the intestine due to an increase in the number of serotonin-producing cells and their proliferation significantly activate serotonin synthesis (Toth *et al.*, 2012). This process is accompanied by an increase in the synthesis and release of histamine from mast cells, which enhances the processes of atherogenesis. High concentrations of serotonin and histamine lead to the progression of existing pathological changes.

4. Conclusions

1. Patients with IDA and colorectal cancer, accompanied by malignant tumor anemia, have serotonin metabolic disorders manifested as a significant increase in its blood plasma content.

2. Considering to the initial increase in plasma serotonin due to malignant tumor anemia in patients with colorectal cancer at the stage of diagnosis there is, a promising area of scientific and clinical research is to study the changes in this biologically active compound in the treatment process to use its content as an additional assessment criterion for the degree of compensation of metabolic processes in the treatment of patients.

3. Plasma serotonin in patients with malignant anemia in colorectal cancer is significantly higher than in patients with iron deficiency anemia, which, obviously, makes it possible to use it as an additional differential diagnostic criterion for these diseases.

4. In our opinion, a promising area of research in patients with colorectal cancer with concomitant malignant tumor anemia is the follow-up control of plasma serotonin based on changes in anemia and the further treatment of the underlying disease.

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QUALITY OF LIFE IN PATIENTS WITH DEPRESSIVE DISORDERS

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Summary

The aim of this paper is to study the features of quality of life in patients with depressive disorders, taking into account age and gender. Clinically examined 107 men and 138 women with depressive disorders (ICD-10 codes F31.3, F31.4, F32.0, F32.1, F32.2, F33.0, F33.1, F33.2) using Multicultural Quality of Life Index. Depressive disorders are accompanied by a significant deterioration in the quality of life of patients, principally in psychological (emotional) well-being. In general, quality of life indicators decrease as patients age; women showed lower self-reported quality of life in most areas, these differences were statistically significant in the younger and middle age groups. The assessments of the quality of life of patients by the specialist turned out to be significantly ($p < 0.001$) higher than the self-assessments of patients for all areas of the quality of life, especially in women. The closest self-esteem and quality of life assessment by a specialist were for psychological (emotional) well-being, and the largest differences were found for interpersonal functioning, social-emotional support, community and services support, personal fulfillment, spiritual fulfillment, and overall quality of life. While subjectively patients note the greatest decrease in the quality of life between the ages of 30 and 44, while according to a specialist's assessment, the quality of life decreases most significantly at the age of over 45, especially in women.

Keywords: depression, psychological, emotional well-being, age, gender.

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1. Introduction

Depressive disorders are one of the main problems of modern psychiatric science and practice. Their lifetime prevalence is estimated at 5–17 %, and according to the WHO, major depressive disorder is the third largest cause of disease burden in the world, and, according to experts, by 2030 will come out on top (WHO, 2015; Malhi G.S., Mann J.J., 2018; Murray C.J., 2018).

Depression is a disease that is accompanied by severe socio-psychological maladaptation and significant deterioration of psychosocial functioning (Hammer-Helmich L. et al., 2018; Saragoussi D. et al, 2018). In depressive disorders there are pronounced disorders of microsocial functioning not only of the patients themselves, but also of their immediate environment, in particular, the deformation of homeostasis of the family system (Pshuk N. et al., 2018).

An important role in the final result of treatment is played by quality of life and psychosocial readaptation of patients, which affects the quality and duration of remission (Kraus C. et al., 2019). Restoration of full social functioning and quality of life of patients is also an important factor in reducing the therapeutic resistance of affective disorders (Markova M. et al., 2017).

Depressive disorders are also accompanied by a significant deterioration in the quality of life of patients. The quality of life is considered as one of the key indicators of the

biopsychosocial functioning of an individual, as well as an important indicator of the effectiveness of treatment and rehabilitation for mental disorders (*Dhungana S. et al., 2021*).

Continued research on the quality of life of depressed patients is important in the context of the pathomorphosis of depressive disorders (*Cleare A. et al., 2015*). It is obvious that a change in the clinical course of depressive disorders affects the quality of life of patients and the prospects for restoring their social functioning, and these features need to be studied.

All this determines the relevance of modern studies of the quality of life of patients with depression and the need for a detailed study of the characteristics of the quality of life in different areas, taking into account age and gender characteristics.

2. The aim of the study

The aim is to study the features of quality of life in patients with depressive disorders, taking into account age and gender.

3. Materials and methods

With the observance of the principles of biomedical ethics, we have clinically examined 107 men and 138 women who applied for medical care at Vinnytsya Regional Psycho-Neurological Hospital and Department of Medical Psychology and Psychiatry National Pirogov Memorial Medical University from 2015 to 2019. The nosological structure of the contingent was as follows ICD-10 codes: F31.3, F31.4, F32.0, F32.1, F32.2, F33.0, F33.1, F33.2. The average age of the men was 34.2 ± 11.1 years, and 33.2 ± 11.4 years for women ($p=0.422$), the average duration of depression was 5.7 ± 5.8 years for men, and 4.5 ± 5.4 years for women ($p=0.064$). 3 subgroups were allocated in group of men and women depending on the age of patients at the time of the study: up to 30 years (M1 and W1, respectively), from 33 to 44 years (M2 and W2 groups, respectively), 45 years and older (M3 and W3 groups, respectively). The study was conducted using Multicultural Quality of Life Index (MQLI) (*Mez-zich J. et al., 2011*). Statistical analysis of differences between groups was carried out using non-parametric Mann-Whitney test.

4. Results

In general, patients with depression (both men and women) have low levels of quality of life according to self-reported data (Tables 1 and 2). Patients rate their quality of life the lowest in psychological (emotional) well-being, where the average indicators are less than 3 points out of 10 in the younger age groups (M1 and W1), and further decrease to 1.7-2.0 points in the middle age groups. groups (M2 and W2) up to 1.4-1.6 in older groups (M3 and W3). Low self-esteem scores (within 2.0-4.0 points in M1 and W1 groups, within 1.7-3.0 points in M2 and W2 groups, and within 1.4-2.8 points in M3 groups and W3) were also identified for physical well-being, occupational functioning, personal fulfillment and overall quality of life, and in women – for interpersonal functioning. The highest self-esteem indices were found in the areas of community and services support, social-emotional support and spiritual fulfillment (from 4.6-6.8 points in the M1 and W1 groups to 2.5-5.6 points in the M3 and W3 groups).

Table 1

Self-reported characteristics of quality of life in men with depressive disorders

Item	Value, points			P		
	M1	M2	M3	M1 vs M2	M1 vs M3	M2 vs M3
Physical well-being	3,68±1,36	2,80±1,15	1,65±0,88	0,002	0,000	0,000
Psychological (emotional) well-being	2,82±1,04	2,00±0,67	1,61±0,58	0,000	0,000	0,022
Self-care and independent functioning	4,34±0,78	2,96±1,59	2,35±0,78	0,000	0,000	0,261
Occupational functioning	3,00±0,96	2,22±0,96	1,30±0,47	0,000	0,000	0,000
Interpersonal functioning	4,63±1,42	4,09±1,62	2,83±0,94	0,125	0,000	0,002
Social-emotional support	5,79±1,77	3,17±1,30	2,70±1,22	0,000	0,000	0,132
Community and services support	6,76±1,17	6,43±1,66	5,52±1,38	0,402	0,001	0,020
Personal fulfillment	3,29±1,29	2,89±1,34	2,04±1,11	0,228	0,001	0,013
Spiritual fulfillment	5,00±1,38	4,63±1,85	3,78±1,81	0,418	0,009	0,081
Overall quality of life	3,37±1,53	1,78±1,46	1,43±0,66	0,000	0,000	0,831
Total score	4,27±0,82	3,30±0,96	2,52±0,68	0,000	0,000	0,001

The general trend is the deterioration quality of life indicators decrease as patients age. In men, more significant differences between the younger and middle age groups were found for physical well-being, psychological (emotional) well-being, self-care and independent functioning, occupational functioning, social-emotional support, overall quality of life and total score of quality of life. Between the middle and older age groups, more significant differences were found for interpersonal functioning, community and services support, and personal fulfillment. In women, more significant differences between the younger and middle age groups were found for psychological (emotional) well-being, social-emotional support, community and services support, personal fulfillment, spiritual fulfillment, overall quality of life, and total score, and between middle and senior age groups – for physical well-being, occupational functioning and interpersonal functioning.

Table 2

Self-reported characteristics of quality of life in women with depressive disorders

Item	W1	W2	W3	P		
				W1 vs W2	W1 vs W3	W2 vs W3
Physical well-being	2,90±1,75	2,25±1,19	1,50±0,75	0,058	0,000	0,004
Psychological (emotional) well-being	2,25±1,09	1,68±0,64	1,38±0,55	0,008	0,000	0,029
Self-care and independent functioning	3,39±1,91	2,47±1,22	2,18±1,11	0,019	0,006	0,277
Occupational functioning	2,49±1,43	1,92±1,09	1,41±0,66	0,054	0,000	0,026
Interpersonal functioning	3,88±1,70	3,38±1,76	2,44±1,19	0,143	0,000	0,018
Social-emotional support	4,67±2,51	2,55±1,32	2,50±1,21	0,000	0,000	0,968
Community and services support	7,12±1,56	6,08±1,74	5,59±2,24	0,002	0,002	0,417
Personal fulfillment	3,45±1,21	2,72±1,47	1,88±0,81	0,003	0,000	0,008
Spiritual fulfillment	5,24±1,58	4,43±1,93	4,15±1,83	0,036	0,004	0,468
Overall quality of life	2,35±1,09	1,77±1,07	1,41±0,61	0,002	0,000	0,182
Total score	3,77±1,22	2,92±0,97	2,44±0,84	0,001	0,000	0,039

In general, women showed lower self-reported quality of life in most areas. However, these differences were statistically significant only in the younger and middle age groups. When comparing the M1 and W1 groups, significant differences were found for physical well-being ($p=0.042$), psychological (emotional) well-being ($p=0.020$), self-care and independent functioning ($p=0.026$), interpersonal functioning ($p=0.035$), social-emotional support ($p=0.027$), and overall quality of life ($p=0.001$). When comparing the M2 and W2 groups, significant differences were found for physical well-being ($p=0.024$), psychological (emotional) well-being ($p=0.018$), interpersonal functioning ($p=0.040$), social-emotional support ($p=0.020$). Between the M3 and W3 groups, the differences in quality of life indicators in all spheres are statistically insignificant ($p>0.05$).

It is important to understand the peculiarities of the subjective perception of patients with depression of their social functioning and quality of life by comparing the data of self-assessment of the quality of life and the assessment of these same areas by a specialist psychiatrist. We carried out such a comparison, which allowed us to identify interesting patterns (table 3 and 4).

In general, the assessments of the quality of life of patients by the specialist turned out to be significantly ($p<0.001$) higher than the self-assessments of patients for all areas of the quality of life. This difference is especially pronounced in women. The closest self-esteem and quality of life assessment by a specialist were for psychological (emotional) well-being, and the largest differences were found for interpersonal functioning, social-emotional support, community and services support, personal fulfillment, spiritual fulfillment, and overall quality of life.

Table 3

Quality of life characteristics in men with depressive disorders as assessed by a specialist

Item	Value, points			p		
	M1	M2	M3	M1 vs M2	M1 vs M3	M2 vs M3
Physical well-being	5,39±2,05	3,98±2,48	3,13±2,30	0,008	0,000	0,156
Psychological (emotional) well-being	3,13±1,28	2,15±1,23	1,78±1,17	0,001	0,000	0,150
Self-care and independent functioning	5,26±1,48	3,93±1,94	2,74±1,84	0,002	0,000	0,025
Occupational functioning	3,95±1,16	3,07±1,60	2,39±1,50	0,003	0,000	0,057
Interpersonal functioning	6,21±0,96	5,67±1,19	4,39±1,50	0,016	0,000	0,001
Social-emotional support	7,84±1,22	6,65±1,49	5,70±1,89	0,000	0,000	0,025
Community and services support	9,55±1,33	8,48±2,48	7,00±3,66	0,027	0,003	0,129
Personal fulfillment	6,11±0,80	5,20±1,19	4,30±1,61	0,000	0,000	0,027
Spiritual fulfillment	7,50±1,27	6,93±1,20	5,57±0,99	0,043	0,000	0,000
Overall quality of life	4,79±0,66	3,98±0,93	3,30±1,43	0,000	0,000	0,072
Total score	5,97±0,92	5,00±1,32	4,03±1,52	0,001	0,000	0,008

The general trend towards a deterioration in the quality of life with the age of patients persists even when evaluated by a specialist. In men, the most pronounced deterioration in performance between groups M1 and M2 was revealed for physical well-being, psychological (emotional) well-being, self-care and independent functioning, occupational functioning, social-emotional support, community and services support, personal fulfillment, overall quality

of life and for total score of quality of life. A more pronounced deterioration in performance between groups M2 and M3 was revealed for interpersonal functioning, and spiritual fulfillment. In women, all indicators of quality of life deteriorate more significantly when comparing groups W2 and W3 than when comparing groups W1 and W2.

Table 4

Quality of life characteristics in women with depressive disorders as assessed by a specialist

Item	Value, points			p		
	W1	W2	W3	W1 vs W2	W1 vs W3	W2 vs W3
Physical well-being	6,04±2,12	4,77±2,50	2,82±1,88	0,008	0,000	0,000
Psychological (emotional) well-being	3,43±1,30	2,72±1,41	1,71±1,00	0,009	0,000	0,001
Self-care and independent functioning	5,45±1,49	4,96±2,14	2,76±1,78	0,285	0,000	0,000
Occupational functioning	4,27±1,33	3,64±1,35	2,44±1,44	0,018	0,000	0,000
Interpersonal functioning	6,41±1,17	5,89±1,25	4,74±1,38	0,033	0,000	0,000
Social-emotional support	7,86±1,15	7,34±1,60	5,74±1,78	0,173	0,000	0,000
Community and services support	9,35±1,40	9,15±2,08	7,56±3,22	1,000	0,011	0,020
Personal fulfillment	6,37±1,00	5,77±1,01	4,15±1,33	0,006	0,000	0,000
Spiritual fulfillment	8,14±1,34	7,32±1,34	6,00±1,23	0,005	0,000	0,000
Overall quality of life	5,00±0,80	4,62±0,97	3,24±1,30	0,053	0,000	0,000
Total score	6,23±1,08	5,62±1,25	4,11±1,36	0,011	0,000	0,000

When comparing quality of life indicators in men and women according to the assessment by a specialist, statistically significant differences were revealed mainly in the middle age group (M2 vs W2): for psychological (emotional) well-being ($p = 0.042$), self-care and independent functioning ($p = 0.019$), occupational functioning ($p = 0.026$), social-emotional support ($p = 0.024$), personal fulfillment ($p = 0.013$), overall quality of life ($p = 0.001$), and total score of quality of life ($p = 0.028$). In the younger age group (M1 vs W1), significant differences were found for spiritual fulfillment only ($p = 0.034$), and in the older age group (M3 vs W3), the differences between all indicators of quality of life in men and women are not statistically significant ($p > 0, 05$).

5. Discussion

The data obtained in our study coincide with the data of many earlier studies that established low levels of quality of life in patients with depressive disorders. Low mood, pessimism, anhedonia, asthenia, which are the key symptoms of depression, cause low self-esteem in those areas of quality of life that reflect the perception of one's physical and psychological state. It should be noted that, despite low self-esteem, the lowest indicators of quality of life in the emotional sphere are an adequate reflection of affective pathology, especially in cases of severe depression. It is natural that the indicators of self-assessment of the quality of life in this area, according to self-assessment data, are the closest to those of a specialist's assessment. At the same time, indicators in the field of physical health in self-assessment by patients were clearly underestimated under the influence of depressive perception, while indicators according to the

assessment by a specialist were satisfactory. Depression reduces the level of social interaction of patients and worsens the quality of life in those areas that reflect the individual's social activity (interpersonal functioning, social-emotional support, community and services support, personal fulfillment, spiritual fulfillment), and this leads to low scores.

The gender differences in the quality of life of patients with depression identified in our study were consistent with the data of some earlier studies, which noted lower indicators of the quality of life in women. Women tend to be more attentive to their condition, including mental, and emotional problems are more difficult. It is important to note that according to the assessment of the quality of life by a specialist, women have higher indicators than men, while according to self-assessment, the ratio is the opposite. This is consistent with our data on the same population of patients about higher rates of depression in men compared with women. At the same time, it should be borne in mind that trends may differ in different age groups.

The general pattern of deterioration in the quality of life with age reflects the progression of the depressive process, as well as the general decline in mental and social functioning associated with aging. At the same time, subjectively, patients note a more significant decrease in the quality of life between the ages of 30 and 44, while according to a specialist's assessment, the greatest deterioration in the quality of life of patients with depression occurs at the age of over 45, especially in women.

6. Conclusions

Depressive disorders are accompanied by a significant deterioration in the quality of life of patients.

The lowest indicators of quality of life were noted for psychological (emotional) well-being, low indicators were also found for physical well-being, occupational functioning, personal fulfillment and overall quality of life.

According to the data of a subjective assessment, the quality of life is lower in women, and according to the assessment by a specialist – in men.

The quality of life decreases with the age of patients, while subjectively patients note the greatest decrease in the quality of life between the ages of 30 and 44, while according to a specialist's assessment, the quality of life decreases most significantly at the age of over 45, especially in women.

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THE USE OF HEPATOPROTECTORS IN THE PHARMACOTHERAPY OF COMORBID VASCULITIS WITH CRYOGLOBULINEMIC SYNDROME

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Summary

The article presents studies concerning the pharmaceutical therapy and provision among patients with comorbid vasculitis with cryoglobulinemic syndrome. Information from various authors on subject and particularities of its treatment was analyzed. While conducting literature review, used pharmaceutical and economic, organizational and legal, forensic and pharmaceutical approaches and methodology in studying of particularities of pharmaceutical therapy and provision among patients with above-mentioned illness. ABC/VEN analysis was used in study to select the most effective and safe drugs, while keeping in mind treatment costs in Ukraine. The matrix of the consolidated ABC/VEN analysis of drugs for treatment of mentioned patients with comorbid vasculitis in Ukraine using hepatoprotectors was developed during the study. Further researches needed in order to implement into the state programs for pharmaceutical therapy and provision among patients with comorbid vasculitis with cryoglobulinemic syndrome. Importance in making appropriate administrative and managerial decisions while detecting the comorbid vasculitis in order to improve the use of drugs in healthcare facilities was proved.

Keywords: medicine, vasculitis, comorbidity, pharmacotherapy, pharmacoeconomic, ATC-code A16AA02.

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1. Introduction

Vasculitis is a scattered collection of rare diseases characterized by inflammation of the blood vessel walls. It can cause damage to a number of different organs and tissues, leading to a wide range of clinical manifestations depending on the affected part of the vascular tree. The reasons are not fully known. Over time, it can damage organs and blood vessels (*Vasculitis, 2017*).

The different types of vasculitis are grouped according to the size of the affected blood vessels. For example, vasculitis of large vessels, giant cell arteritis, primarily affects elderly patients, manifests itself in headaches and pain in the jaw while eating. Vasculitis affecting medium-sized vessels includes Kawasaki disease et al. Small vessel vasculitis includes immunoglobulin A vasculitis, cryoglobulinemia vasculitis, and hypersensitivity vasculitis. Vasculitis can be primary and autoimmune in nature, or comorbid with immune-dependent syndromes, infection, drugs, or cancer (*Fellner, 2016*).

The most common autoimmune vasculitis is the subgroup associated with antineutrophilic cytoplasmic antibodies (AAV), which predominantly affect small to medium sized blood vessels in the body. AAV – associated vasculitis, although rare, must be diagnosed and treated early, or it can rapidly progress to organ failure and death. Patients can present with a wide range of symptoms, from acute manifestations with rapidly progressive liver disease, kidney disease, and pulmonary hemorrhage, to subtle nasal or hearing problems (*Vincent et al., 2015*).

AAV-associated vasculitis is more common in older adults. The peak age of disease onset is 65–74 years, and the annual incidence is 20 cases per million population. The cause of AAV is unknown, but a genetic predisposition is believed to exist. Patients with AAV may experience general symptoms of inflammation such as fever, malaise, weight loss, muscle and joint pain; these nonspecific symptoms often lead to late diagnosis. The skin is affected by a purple rash on the lower extremities. The liver and kidneys (among 90% of patients), lungs, eyes, intestines, and the peripheral nervous system are often affected (*Marushko, 2020*).

The main problems of pharmacotherapy are the elimination of the chronic damage caused by the disease and the toxicity of the treatment. The risk of treatment-related illnesses increases over time and may include cardiovascular disease, diabetes, osteoporosis, and cancer. Mortality is highest during the first year after diagnosis, during which infection is the leading cause of death. Cardiovascular disease and cancer become more common after the first year of life. Between 20% and 40% of AAV patients become dialysis dependent within three to five years. For many patients, fatigue significantly reduces the quality of life. There is no cure for AAV, so the goal of treatment is to achieve and maintain remission (defined as the absence of disease activity). Treating comorbid vasculitis is challenging. In many cases, vasculitis is treated as a chronic condition. Pharmacotherapy options vary according to the form of vasculitis. It is important to note that when vasculitis is treated, the immune system is suppressed and the risk of infections is increased.

2. Pharmacoeconomic studies in the pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome

Immune-dependent process due to the presence in the serum of pathological proteins – cryoglobulins, is accompanied by the development of cryoglobulinemic syndrome. Cryoglobulins are reverse precipitated at temperatures below 37°C in vessels of small and medium caliber, which often leads to the development of comorbid vasculitis.

According to statistics, cryoglobulinemic syndrome is found among 46.7% of patients with comorbid vasculitis (*Kuzmina, 2015*).

Careful monitoring of side effects is required with any treatment for vasculitis. Because there is a high risk of infection, screening for infection (including tuberculosis) should be carefully considered before initiating immunosuppressive therapy. Patients should also be advised to be vaccinated against influenza and pneumococcus. After starting treatment, urea and electrolytes, general blood tests and liver function tests should be checked regularly, usually first every one or two weeks, although this depends on the type and intensity of therapy. Patients in remission receive maintenance treatment for at least 12 months. Relapses are common, with 50% of patients having relapses within five years (*Vincent et al., 2015*).

Systemic vasculitis is one of the most severe forms of chronic comorbid pathology, which is complicated by pulmonary hemorrhage, myocardial infarction, renal failure, hepatobiliary and neurological disorders, limb gangrene (*Marushko, 2020*).

The stages of diagnosis of comorbid vasculitis include: identification of clinical symptoms and syndromes that suggest the presence of vasculitis; exclusion of other processes that mimic primary vasculitis; assessment of the prevalence of the process in the vessels (in the process of computer angiographic examination); determination in accordance with the qualification criteria of the variant of vasculitis (confirmed by biopsy results) (*Kuzmina, 2015*).

Modern views on the main, more common comorbid vasculitis, their pathogenesis, clinical picture, methods of diagnosis and evaluation of clinical manifestations from the standpoint

of a primary care physician – general (family practice) are considered. Given the plan of examination of the patient, laboratory and instrumental changes at the main vasculitis, methods of treatment (Krivenko *et al.*, 2018).

The US vasculitis pharmaceutical market is expected to grow at a rate of 3.8% per year for the decade from 2014 to 2024, reaching sales of \$316 million (Fellner, 2016).

With the spread of the coronavirus pandemic (Shapovalova *et al.*, 2020), the role of pharmacotherapy of systemic vasculitis with cryoglobulinemic syndrome among patients with dual health disorders and among patients with systemic diseases (control regime of antibacterial drugs for pharmacotherapy of coronavirus disease (COVID-19) among patients with dual disorders: newsletter) becomes very relevant (Hayduchok *et al.*, 230-2020; Hayduchok *et al.*, 225-2020).

Despite numerous publications on COVID-19, at present, conceptual thinking of the problem is only at a nascence stage. Treatment of patients with ANCA-associated systemic vasculitis (AAV) during the COVID-19 pandemic is one of the relevant issues. Further analysis of COVID-19 in patients with AAV is important (Beketova, 2019).

The experience of the USA concerning and organization of healthcare system for the pharmaceutical provision for privileged categories of citizens (Shapovalov (Jr.) *et al.*, 2019) was written earlier; forensic and pharmaceutical analysis of addictive morbidity because of the use of psychoactive substances in Ukraine (Shapovalov (Jr.) *et al.*, 2020); experience of Great Britain in the organization of healthcare system for pharmaceutical provision with medicines for privileged categories of citizens (Shapovalov (Jr.) *et al.*, 2019).

Treatment of cryoglobulinemic syndrome remains a challenge. In secondary cryoglobulinemia, treatment of the underlying disease is crucial. In comorbid vasculitis on the background of mixed cryoglobulinemia, the treatment strategy is based on antiviral, anti-inflammatory and immunosuppressive pharmacotherapy.

The objectives of pharmacotherapy for cryoglobulinemic syndrome include reducing the level of immunoglobulins and elimination of antigen by phagocytosis through the liver, spleen and the like.

The first problem can be solved by using immunosuppressive pharmacotherapy and hepatoprotectors; the second task – through the use of antiviral therapy, which reduces the concentration of antigens in the body.

Today it is important to use modern, effective and safe hepatoprotectors for pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome. Pharmacoeconomic approaches, in particular ABC/VEN analysis, are used to select effective and safe drugs.

Purpose of the research – the use of hepatoprotectors in the pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome based on pharmacoeconomic approaches with ABC/VEN analysis.

Material and methods. According to the clinical and pharmacological group for pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome were selected hepatoprotectors that have the diagnostic code of the ATC-Classification (ATC): A “Agents affecting the digestive system and metabolism”; A16 “Other agents affecting the digestive system and metabolic processes”, A16A “Other agents affecting the digestive system and metabolic processes”, A16AA “Amino acids and their derivatives” by INN Ademetionine (ATC-classification, 2020).

As hepatoprotectors was proposed drug according to INN Ademetionine ATC-code A16AA02 at a dose of 1000 mg 2 times a day for 21 days in the form of three courses with an interval between courses of 1 month.

Ademetionine is used as a hepatoprotector in diseases according to ICD-10: B – some infectious and parasitic diseases; F – mental and behavioral disorders; K – diseases of the digestive system; O – complications of pregnancy, childbirth.

To assess the cost of pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome ABC analysis was performed as a tool to study the cost of purchasing drugs. ABC analysis involves the distribution of drugs from the most to the least expensive depending on their share among the indicators of the general purpose of drugs (*Management Science for Health, 2012; Shapovalov (Jr.) et al., 2018*).

To assess the effectiveness of drug use, a VEN analysis was performed to classify drugs into categories V (vital), E (essential) and N (non-essential), taking into account regulatory documents: medical care standards, clinical protocols, State Form of Medicines (*Order of the Ministry of Health of Ukraine, 2020*), National List of Essential Medicines (*National list of basic medicines, 2009*) and principles of evidence-based medicine (evidence of efficacy, quality, safety, economy, affordability). The following approach was used in this analysis: the division of drugs into categories V – “Vital” (vital); E – “Essential” (necessary) and N – “Non-essential” (secondary, unimportant).

Study Design is based on pharmacoeconomic, organizational and legal (*Shapovalov (Jr.) et al., 2018*), forensic and pharmaceutical (*Shapovalova et al., 2021*) approaches to pharmacotherapy with using literature review.

The USAID delivery project logistics indicator assessment tool was employment to determine the sample size of health facilities. It recommends a minimum of 15% of the total health facilities inclusion (*Snow, 2005*).

The research of the article is a fragment of research works of Lviv Medical Institute LLC on the topic “Improvement of the drug circulation system during pharmacotherapy on the basis of evidentiary and forensic pharmacy, organization, technology, biopharmacy and pharmaceutical law” (state registration number 0120U105348, terms 2021-2026), Kharkiv Medical Academy of Postgraduate Education on “Improving the organizational and legal procedure for providing patients with drugs from the standpoint of forensic pharmacy, organization and management of pharmacy” (state registration number 0116U003137, terms 2016-2020) and “Pharmaceutical and medical law: integrated approaches to the system of drug circulation from the standpoint of forensic pharmacy and organization of pharmaceutical business” (state registration number D/21U000031, terms 2021-2026) (*Shapovalov (Jr.) et al., 2017*).

In the International Classification of Diseases of the 10th revision, systemic vasculitis is a disease of the musculoskeletal system (class XIII), where 12 blocks are identified. For example, M30 – nodular polyarteritis and related conditions; M31 – other necrotizing vasculopathies; M35 – other systemic connective tissue lesions. Small vessel vasculitis includes immunoglobulin A vasculitis, cryoglobulinemia vasculitis, and hypersensitivity vasculitis (*Fellner, 2016*).

Vasculitis Shenlein-Genoha has the code of the International Classification of Diseases 10 edition D69 “Purpura and other hemorrhagic conditions” class “Diseases of the blood, blood-forming organs and certain disorders involving immune mechanisms.” The code of the International Classification for Primary Care-2 is B83 (*Hayduchok et al., 64-2021*).

Shenlein-Genoch vasculitis is a hemorrhagic vasculitis with IgA-immune deposits that affects small vessels (capillaries, venules, arterioles).

In international treatment protocols, Shenlein-Genoch vasculitis is called IgA-associated vasculitis (*Fellner, 2016*).

The pharmacotherapy of comorbid vasculitis includes drugs included in clinical international and national protocols: Heparin, Acetylsalicylic acid, Prednisolone, Ciclosporin,

Paracetamol, Hydroxychloroquine, Ergocalciferol, Azithromycin, Pancreatin (*International Guideline 00653, 2016; International Guidelines 00449, 2017*).

According to clinical and pharmacological analysis, the largest share of drugs for pharmacotherapy of comorbid vasculitis (22.22%) have diagnostic codes of ATC classification: A – “Drugs that affect the digestive system and metabolism” and N – “Drugs that affect the nervous system”.

With the personal participation of the author, a scheme of pharmacotherapy with the use of hepatoprotectors for the treatment of underlying and comorbid diseases was developed.

Drug therapy of comorbid vasculitis with cryoglobulinemic syndrome included the use of hepatoprotectors according to the INN Ademetionine ATC-code A16AA02.

At a later stage, marketing and pharmacoeconomic studies of drugs were performed according to INN Ademetionine ATC-code A16AA02 (Table 1).

Table 1

Marketing – analysis of drugs according to INN Ademetionine by ATC-code A16AA02 for comorbid vasculitis with cryoglobulinemic syndrome

No	Trade name / Manufacturer	Dosage form, strength, amount per unit	Registration certificate Term
1	2	3	4
1.	Hepamethion PJSC “Kyivmedpreparat” (manufacturer of lyophilisate, responsible for the release of a batch of finished drug), Ukraine PJSC “Halychpharm” (solvent manufacturer), Ukraine	Lyophilisate for solution for injection of 400 mg, 5 vials of lyophilisate complete with 5 ampoules of solvent (L-lysine, sodium hydroxide, water for injections) of 5 ml in a contour honeycomb package; 1 contour honeycomb package in a cardboard pack	UA/15978/01/01 12.05.2017-12.05.2022
2.	Heptral Famar A.V.E. Alimos Plant 63, street Ag. Dimitriou (manufacture, primary packaging, quality control and batch of solvent in bulk), Greece Delpharm Saint-Remy (manufacture, primary packaging and quality control of lyophilised powder; secondary packaging, quality control and batch release of finished medicinal product), France Biologisi Italy Laboratories S.R.L. (manufacture, primary packaging and quality control of lyophilised powder; secondary packaging, quality control and batch release of finished medicinal product; production, primary packaging and quality control of solvent), Italy	Lyophilized powder for solution for injection of 500 mg, 5 glass vials of lyophilized powder and 5 ampoules with solvent (L-lysine, sodium hydroxide, water for injections) of 5 ml in a contour honeycomb package sealed with aluminum foil; 1 contour honeycomb package in a cardboard box	UA/6993/02/02 Unlimited from 24.02.2021

Table 1 (Continued)

1	2	3	4
3.	Heptral Famar Legl (manufacture, primary packaging and quality control of lyophilised powder; secondary packaging, quality control and batch release of finished medicinal product), France Famar A.V.E. Alimos Plant 63, street Ag. Dimitriou (manufacture, primary packaging, quality control and batch of solvent in bulk), Greece Biologis Italy Laboratories S.R.L. (manufacture, primary packaging and quality control of lyophilised powder; secondary packaging, quality control and batch release of finished medicinal product), Italy	Lyophilized powder for solution for injection of 400 mg, 5 glass vials of lyophilized powder and 5 ampoules with solvent (L-lysine, sodium hydroxide, water for injections) in 5 ml in a contour honeycomb package; 1 contour honeycomb package in a cardboard box	UA/6993/02/01 Unlimited from 19.05.2017
4.	Hep-art JSC "Farmak", Ukraine	Enteric tablets, 400 mg; 4 tablets in a blister; 5 blisters in a pack	UA/18365/01/01 12.10.202012.10.2025
5.	Rehol LLC NVF "MICROCHEM", Ukraine	Enteric tablets of 400 mg, 8 tablets in a blister, 1 or 3 blisters in a pack of cardboard; 10 tablets in a blister; 2 blisters in a pack of cardboard	UA/17043/01/01 20.11.201820.11.2023
6.	Heptral Abbvi S.r.l., Italy	Enteric tablets of 500 mg of 10 tablets in a blister; 2 blisters in a cardboard box	UA/6993/01/02 Unlimited from 26.01.2021
7.	Heptral Abbvi S.r.l., Italy	Enteric tablets of 400 mg, 10 tablets in a blister; 1 or 2 blisters in a cardboard package	UA/6993/01/01 Unlimited from 19.05.2017

For pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome tablets occupy 57% of prescriptions, lyophilized powder for solution for injection – 43%.

The studied drugs in 57% have an unlimited validity of registration certificates.

Ranking of manufacturers of studied drugs: Ukraine – 43%; Italy – 57%.

The next task was to conduct pharmacoeconomic research through ABC/VEN analysis, which involves the distribution of drugs by the cost of pharmacotherapy and evaluation of the effectiveness of drug use in a health care facility (tables 2, 3).

According to the results of ABC analysis, category A included drugs, the use of which was equal to 80.34% of the total rate of use; to category B – 14.68%, and to category C – 4.99%.

Category A included four drugs: Heptral (Lyophilized powder for solution for injection of 500 mg); Heptral (Lyophilized powder for solution for injection of 400 mg); Hepamethion; Heptral (Enteric tablets of 500 mg). The cost of one dose is 465,55 UAH, which is 80.34% of the total cost of pharmacotherapy.

Table 2

**ABC analysis of drugs according to INN Ademetionine code A16AA02
for pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome**

No.	Trade name	Dose costs, UAH	Share (%)	ABC category
1.	Heptral (Lyophilized powder for solution for injection of 500 mg)	153,40	26,47	A
2.	Heptral (Lyophilized powder for solution for injection of 400 mg)	135,00	23,30	A
3.	Hepamethion	115,80	19,98	A
4.	Heptral (Enteric tablets of 500 mg)	61,35	10,59	A
	Total for category A	465,55	80,34	
5.	Heptral (Enteric tablets of 400 mg)	55,30	9,54	B
6.	Rehol	29,75	5,13	B
	Total for category B	85,05	14,68	
	Total for categories AB :	550,6	95,01	
7.	Hep-art	28,90	4,99	C
	Total for category C:	28,90	4,99	
	Total for categories ABC:	579,50	100,00	

Category B included two drugs: Heptral (Enteric tablets of 400 mg) and Rehol. The cost of one dose of category B drugs is 80.05 UAAN (14.68%).

One drug (Hep-art) is designed for category C. The cost is 28.90 UAAN per unit dose (4.99%).

Table 3

**VEN-analysis of drugs according to INN Ademetionine code A16AA02
for pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome**

No	Trade name	VEN category
1.	Heptral (Lyophilized powder for solution for injection of 500 mg)	E
2.	Heptral (Lyophilized powder for solution for injection of 400 mg)	E
3.	Hepamethion	E
4.	Heptral (Enteric tablets of 500 mg)	E
5.	Heptral (Enteric tablets of 400 mg)	E
6.	Rehol	E
7.	Hep-art	E

According to the results of VEN analysis, it was found that all seven drugs – Heptral (Lyophilized powder for solution for injection of 500 mg); Heptral (Lyophilized powder for solution for injection of 400 mg); Hepamethion; Heptral (Enteric tablets of 500 mg); Heptral (Enteric tablets of 400 mg); Rehol; Hep-art belong to category E.

Categories V (vital) and N (non-essential) did not include any drugs.

The distribution of VEN analysis of investigational drugs by INN Ademetionine code A16AA02 comorbid vasculitis with cryoglobulinemic syndrome is shown in Fig. 1.

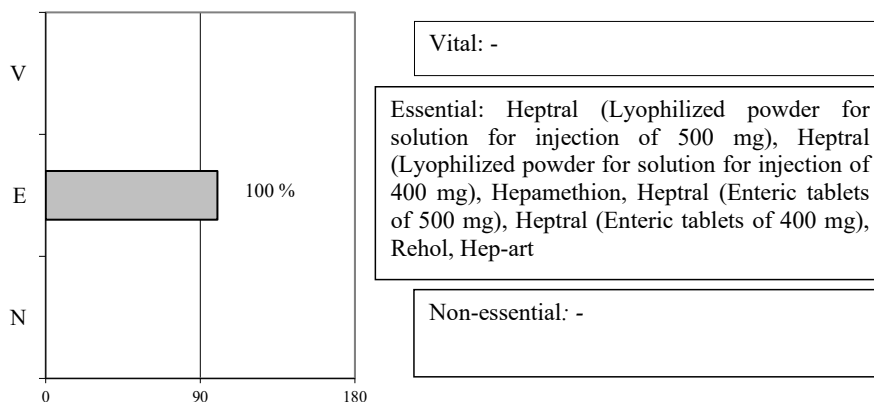


Fig. 1. Distribution according to the results of VEN analysis of studied drugs according to INN Ademetonine code A16AA02 for comorbid vasculitis with cryoglobulinemic syndrome

Tested drugs in 100% (Heptral, Lyophilized powder for solution for injection of 500 mg; Heptral, Lyophilized powder for solution for injection of 400 mg; Hepamethion; Heptral, Enteric tablets of 500 mg; Heptral, Enteric tablets of 400 mg; Rehol; Hep-art) are included in pharmacotherapy as Essential (category E).

Based on the ABC/VEN analysis, a matrix of the consolidated ABC/VEN analysis was developed (Table 4).

Table 4

Matrix of the consolidated ABC-VEN-analysis of drugs according to INN Ademetonine under the code A16AA02 for comorbid vasculitis with cryoglobulinemic syndrome

Drugs categories	Drugs quantity	V		Drugs quantity	E		Drugs quantity	N	
		Drugs prescription			Drugs prescription			Drugs prescription	
		UAH	%		UAH	%		UAH	%
A	-	-	-	4	465,55	80,34	-	-	-
B	-	-	-	2	85,05	14,68	-	-	-
C	-	-	-	1	28,90	4,99	-	-	-
Total:	-	-	-	7	579,50	100,00	-	-	-

Category E drugs took the most prescriptions (100%).

The share of costs that accounted for drugs in the niches of the matrix.

The niche of the A/E matrix took 80.34%. Examples: Heptral (Lyophilized powder for solution for injection of 500 mg) / Heptral (Enteric tablets of 500 mg). This niche of the matrix took the largest indicator of the total cost of pharmacotherapy and doctor's appointments.

Niches of the matrix A/V – 0% and A/N – 0%.

The niche of the B/E matrix was 14.68%. Drugs: Heptral (Enteric tablets of 400 mg) / Rehol.

Niches of the matrix B / V – 0% and B / N – 0%.

Drugs in the niches of the matrix in category C had the following indicators: C/E – 4.99% Hep-art; C/N – 0%; C/V – 0%.

3. Conclusions and suggestions

The relevance and necessity of the chosen research topic as a result of a review of the scientific literature on the pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome are substantiated.

Clinical and pharmacological analysis of pharmacotherapy of comorbid vasculitis was performed. It is estimated that the drugs under the ATC code A “Drugs that affect the digestive system and metabolism” had a share of 22.22%.

Marketing research of drugs according to INN Ademetionine under code A16AA02 for comorbid vasculitis with cryoglobulinemic syndrome by assortment, countries-manufacturers, dosage forms, registration certificates was carried out.

Pharmacoeconomic studies have been conducted. According to the results of ABC analysis, the drugs according to the INN Ademetionine code A16AA02 for the pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome were distributed in descending order of value.

It is noted that the cheapest, with a high level of affordability at a price (category C) is one drug (Hep-art).

The most expensive, with a low level of economic availability in category A are 4 drugs according to INN Ademetionine (Lyophilized powders for solution for injection and Enteric tablets).

The average price for category C and the average level of availability was recorded for two drugs: Heptral and Rehol.

According to the results of VEN-analysis, it was calculated that the drugs in category E (Essential) accounted for the largest number of doctor's appointments and the cost of therapy (100%). It is estimated that the niche of the A / E matrix took 80.34%. This niche includes the most expensive and necessary drugs for the pharmacotherapy of comorbid vasculitis with cryoglobulinemic syndrome.

In terms of priority for comorbid vasculitis with cryoglobulinemic syndrome developed a matrix of consolidated ABC/VEN analysis of drugs according to INN Ademetionine code A16AA02

The results of the study provide an opportunity to make administrative and managerial decisions in the detection of comorbid vasculitis with cryoglobulinemic syndrome to improve the use of drugs in health care facilities.

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CLINICAL AND NEUROLOGICAL PECULIARITIES OF PATIENT DIAGNOSTICS WITH DEGENERATIVE PATHOLOGY OF THE LUMBAR SPINE

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Summary

The problem of degenerative-dystrophic diseases is relevant due to its high prevalence of pathology. The most common causes of lumbar spine pain are hernias of intervertebral discs and spinal canal stenosis. The lumbosacral spine is prone to present of intervertebral disc hernias due to the peculiarities of biomechanics, and is therefore the main cause of spinal surgery among adult population. The aim of this paper is to analyze the literature and study the diagnostics of degenerative diseases of the lumbar spine. The analytical, bibliosemantic, system approach and system analysis methods were used in the work. We must use neuroimaging data for determining the localization of intervertebral disc herniation and concomitant spinal canal stenosis. Modern standardized set of research includes X-Ray functional spondylography, computed tomography (CT) and MRI. Progress in neurosurgery is more related to use MRI and CT due to its great informativeness. Application of a complex of neuroimaging techniques for degenerative-dystrophic diseases of lumbar spine allows to reduce the number of diagnostic errors and detect diseases in the early stages.

Keywords: intervertebral disc herniation, spinal canal stenosis, computed tomography-myelography, magnetic resonance imaging, and myelography.

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1. Introduction

A recent meta-analysis showed a total of 266 million people (3.63%) worldwide with degenerative spine disease annually (*Ravindra, 2018*). The problem of vertebrogenic pathology was considered quite widely. At the same time, a number of specific methodological issues remain poorly developed. It should be noted that with the apparent multifaceted nature and scope of research, many properties and mechanisms of surgical treatment require additional consideration. The clinical picture should play a significant role in the choice of the method of surgical treatment, since the radiological picture will not always correlate. There are a number of works that have made a significant contribution to the disclosure of the content, diagnosis, treatment of these pathologies, but there is virtually no works about their combination. Clinical manifestations of spinal canal stenosis (SCS) sometimes lead to disability, so solving the problem of timely diagnosis and, accordingly, proper treatment is important.

Literature data and competent non-commercial reports on clinical and neurological peculiarities of diagnosis and surgical treatment of patients with lumbar intervertebral disc herniation complicated by spinal canal stenosis during high-tech neurorehabilitation have turned out to be a fairly limited number. Thus, electromyography (EMG) is used to assess the degree

of nerve damage in its various parts and differential diagnosis of the level of compression of the roots of herniated lumbar intervertebral discs from other neurological pathologies. To diagnose peripheral nerve damage, stimulation E.M.G is used, based on the analysis of evoked electrical muscle responses obtained by indirect electrical stimulation of the peripheral nerve. An overview spondylography of the lumbosacral spine in frontal and lateral projections is also performed using an X-ray machine (Yegorov, 2014). In addition, data from computed tomography (CT scan) of the lumbosacral spine – native, as well as contrast (CT-myelography) studies are used. According to the X-ray data of the lumbosacral spine in 2 projections (or according to CT, Magnetic Resonance Imaging – MRI), the following are determined: symptoms of damage to the bone-articular structures of the spinal segment, displacement of the bone-articular structures, the width of the spinal canal (Mysliwiec et al, 2010).

Accidental findings in the visualization are defined as previously undetected abnormalities that were unexpectedly identified and not related to the purpose of the survey. MRI of the lumbar spine can reveal both clinically insignificant accidental abnormalities of the spine and extraspinal, which can later even can explain the patient's symptoms. Identifying such findings assign various practical and ethical issues regarding clinical management. In lumbar spine magnetic resonance imaging (MRI), despite the signal saturation bands used in standard international protocols to reduce the number and severity of artifacts, accidental deviations can occur from a wide variety of diseases. Therefore, the correct assessment of changes on MRI with the conducted clinical correlation is a key component that must be considered in the process of choosing surgery for pathology of the lumbar spine (Cowley, 2016).

Given the above, the issue of adequate diagnosis of lumbar intervertebral disc herniation of patients with complicated spinal canal stenosis, and its impact on the localization and optimization of surgical treatment and the possibility of functional recovery of patients. The ambiguity of opinions gives rise to further study of the current state of the problem.

The aim of this paper is to analyze the literature and study the diagnostics of degenerative diseases of the lumbar spine.

Materials and methods. The analytical, bibliosemantic, system approach and system analysis methods were used in the work.

2. The results of the study

According to Andreisek et al, there is a need for consensus on clearly defined, unambiguous radiological criteria for determining lumbar spine stenosis in order to improve diagnostic accuracy and formulate reliable criteria for inclusion in clinical trials (Andreisek et al, 2013). An example is the study conducted by Steurer et al, where it is identified 14 different semi-quantitative or qualitative radiologic criteria that are used for the diagnosis of LSS, though they show remarkable variability in terms of their exact individual definitions and intra- and interrater reliability (Steurer et al, 2011). Moreover, studies of the patients with LSS who were candidates for surgery did not reveal a correlation between the clinical symptoms of patients with quantitative and qualitative radiological parameters and with anatomical stenosis and the degree of stenosis, which indicates a factor-related etiology (Kuittinen et al, 2014). Researchers also noted that Instability can best be defined by standing lateral radiograms and flexion-extension radiograms, tak kak canal diameter measurements have not gained much consensus from radiologists, whereas qualitative measures, such as cerebrospinal fluid space obliteration, have achieved greater consensus (Zileli et al, 2020).

Attention is drawn, in terms of the problems of our study to obtain a sufficient amount of information for the diagnosis of lumbar osteochondrosis, the results of using a non-invasive and completely safe ultrasound method (*Abdullaev, 2008; Zareth et al, 2003*). Thus, the diagnostic ability of ultrasonography indicated high informativeness in the visualization of the location, direction and size of protrusions, intervertebral disc herniation (*Ponomarenko, 2015*). Thus, during the initial diagnosis of SCC spinal canal stenosis of the lumbar spine, you can use ultrasound. ultrasound diagnostics (USD).

Another theory is based on data on the variability of the F-wave latency, which makes it possible to judge the functional state of the lumbar spine, which can be used for screening assessment in the differential diagnosis of functional and organic compression of the root. After all, the F-wave, according to modern data, is a muscle motor response that is periodically recorded during supramaximal stimulation of the mixed nerve and has a significantly greater latency than the M-response (*Nazarenko et al, 2017*). By its physiological nature, the F-wave is a muscle response to a return discharge resulting from antidromic stimulation of a motor neuron (*Nikolaev, 2007*).

Despite the importance of the work of the above mentioned researchers, they do not cover many problems, the importance of which has increased recently. Thus, in the world literature there is no single indication for the diagnosis of patients with degenerative pathology of the lumbar spine. According to MRI studies, disc herniation is often found in people without symptoms, i.e. without back and leg pain. If you still have back pain, then an MRI hernia may not be the source of the pain. Therefore, to determine the pathology of the lumbar spine, which may contribute to the development of low back pain, an acceptable method of imaging – MRI, although CT-myelography may also be a useful alternative. Opinion on this issue remains ambiguous. Not all researchers find confirmation of this. MRI is a study of the first line of spinal stenosis, intervertebral disc herniation (IDH), with the help of which it became possible to assess the localization, degree and number of stenotic lesions (*Cowley, 2016*), oral or caudal position of sequesters, displacement of the pulpal nucleus to the posterior longitudinal ligament, root compression, etc. [*Sypyty et al, 2004*]. As shown by the study of Lafian et al, no, despite the significant benefits of MRI, radiological evidence of LSS may be poorly correlated with the clinical picture (*Lafian et al, 2018*). Later, this idea was developed in the work of Zileli M. et al, where it is noted that the main disadvantage of this method is the lack of correlation between symptoms and the degree of stenosis (*Zileli et al., 2020*). Kreiner D. and others, in their study, also argue that there is insufficient evidence of a correlation between clinical symptoms and narrowing of the spinal canal on MRI, computed tomography, CT-myelography (*Kreiner et al., 2013*). Standard MRI sequences are unable to visualize the dynamics of changes that occur in the spine during exercise and movement (*Cowley, 2016*). The main disadvantage of CT is poor differentiation of the dural sac and its contents. CT myelography is used to visualize the dural sac. The main disadvantages of CT-myelography, as well as simple myelography, are the invasiveness of the study and a number of possible side reactions, such as an allergic reaction to a contrast agent, post-dural meningism, neurological disorders with mechanical damage to nerve structures. However, in a number of works, a comparative assessment of CT-myelography and magnetic resonance imaging was carried out, according to the results of which it follows that both methods are quite highly informative. CT-myelography detects more accurately changes in the bone structures, and in the work of R. Bishoff et al. there has been a greater sensitivity and specificity in determining disc herniation and spinal stenosis at the pre- and postoperative stages using CT-myelography (*Bishoff et al, 1993*). The pinnacle of diagnostic capabilities in assessing the state of the spinal canal at the moment is magnetic

resonance imaging. According to Majidi et al, for the diagnosis of LSS in symptomatic and asymptomatic patients with suspected LSS, among the quantitative criteria for MRI results, the most sensitive and specific cross-section of the central spinal canal (less than 77.5 mm² for central stenosis) and the cross-section of lateral notches (less 22.5 mm² for lateral stenosis) (Majidi et al 2019). There is a strong correlation between neurogenic claudication and diagnostic radiological markers of LSS.

Patients with low back pain caused by a herniation often experience pain aggravation in the upright position and typically try to reduce the pain by a light flexion of the lumbar spine (McCall, 2000). This indicates that herniated discs are prone to biomechanical changes, and hence may be influenced by the positioning of the patient. Weight-bearing MRI may increase the diagnostic sensitivity of disc herniations in patients suspected of nerve root compression (Nordberg et al, 2021). Some scientists are inclined to believe that the lack of correlation may not be established by conventional MRI, but it is likely to obtain more reliable data using vertical MRI, because the human spine receives the load in the vertical position. This theory is confirmed by studies of Zhou Z. et al., who claim that the size of the dural sac on MRI is significantly reduced in the vertical position, in contrast to the horizontal position (lying on the back). Standing MRI and DCSA changes were significantly correlated with distance and lameness, with assessment of leg pain on the VAS scale in patients with LSS (Zhou et al., 2020).

As a result of our study, despite the usefulness of MRI, CT, radiological evidence of LSS, there were no reliable signs of correlation between clinical symptoms and X-ray picture of MRI in intervertebral disc herniation complicated by spinal canal stenosis, which confirms Lafian et al and accordingly entails an increase in surgical interventions (Lafian, & Torralba, 2018).

3. Conclusions

To make a clinically reliable diagnosis, as a rule, instrumental diagnostic methods are required:

1. X-rays can help to determine the presence of joint degeneration, fractures, bone malformations, arthritis, tumors or infections.
2. MRI is a valuable method of visualizing morphological changes in soft tissues, including discs, spinal cord and nerve roots, but it should be supported by mandatory functional X-ray tests.
3. CT provides complete information on the morphology of the bone structures of the spine and visualization of the spinal structures in cross section.
4. Electrodiagnostic (neurophysiological) studies are needed to exclude other reasons of sensory and motor disorders, such as peripheral neuropathy and motor neuron disease.

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CLINICAL AND NEUROLOGICAL PECULIARITIES OF LYME DISEASE

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Summary

Goals of our research work are to analyze frequency and prevalence of Lyme borreliosis (LB), to understand engagement of nervous system in pathological process. Also to assess clinical Lyme disease (LD) stages, features, diagnosis, treatment and prevention methods based on the collected data and literature. The data on diagnosis, treatment, prevention of LD and neuroborreliosis (LNB) are carefully gathered from international and domestic publications at PubMed over 2015-2020 years. LB has stages in the course of the disease. The clinical manifestations of this disease are different. LD affects the central and peripheral nervous system, has a multiorgan character, possibly an acute and chronic course of the disease. At the moment, there are various methods for the diagnosis, treatment and prevention of LB, but pathogenesis of the disease has not been sufficiently studied, methods of vaccination have not yet been developed. Damage of nervous system in chronic LD requires further study of the pathogenetic mechanisms and factors of the development of this pathology.

Keywords: Lyme borreliosis, neuroborreliosis, serological tests, neurological features, migratory erythema.

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1. Introduction

The first Lyme disease (LD) case were identified in Ukraine in 1994. Lyme disease (LD) official records started only since 2000. Nowadays, Lyme disease (LD) cases are registered in all regions across country (*Nakaz MOZ Ukrainy № 218, 2005*). Lyme borreliosis (LB) morbidity in Ukraine continuously growing. It is now officially classified as an infectious disease that causes or could potentially cause significant morbidity and mortality (*Centralized Information System for Infectious Diseases of the WHO Regional Office for Europe*). Multicounty LD cases analysis shows that LD most frequently occur in the forest area in moderate-continental climate zone. It is possible to identify zoo-areas for certain species of ixodes mite (IM). The pathogenesis of LD had been relatively little examined. After mite bites and enters *Borrelia* into human skin, the pathological process begin to develop and causes interaction between numerous factors, peculiar and non-peculiar resistance of macroorganisms (*Wackernagel et al., 2005*). Nowadays, the tick and mite-borne borreliosis that characterized by a predominant lesion of the nervous system, named “neuroborreliosis” (*Zinchuk, 2010*). Frequency and severity of lesions of the nervous system depend on LD patients’ place of residence – on average it ranges from 11-40%. For example, in Central and North America it is about 11% (*Centralized Information System for Infectious Diseases of the WHO Regional Office for Europe; Hansen et al., 1991*), in the European Union – 29-33% (*Infektsiyni biuleten pro stan infektsiinoi zakhvoriuvanosti v Ukraini, 2016; Popovych, 2006*), in Asia – 16%. The lack of classification of broad spectrum of neurological and psychosomatic disorders in its acute and chronic stages predetermined needs for this research. Deep comprehensive

clinical, neurological and instrumental peculiarities of nervous system lesions in LB became the topic of our research.

2. The purpose, materials and methods of the study

Aim of our study is to analyze LB frequency and prevalence. Based on literature review we try to understand how nervous system is involved in the pathological process. We aim to assess specific features of the LD clinical conditions, diagnosis, treatment, prevention at each stage. We use carefully selected data from our review of world and domestic literature at PubMed for the period 2015-2020 years. The search criteria: "Lyme disease", "neuroborreliosis", "chronic form", "acute period", "lesions" nervous system", "laboratory diagnosis", "serological diagnosis", "cognitive disorders", "etiopathogenetic therapy", "prevention of Lyme disease". We follow European and Ukrainian guidelines on the diagnosis, treatment and prevention of LD and LNB.

3. Etiopathogenesis of Lyme borreliosis

LB is an infectious communicable disease caused by the spirochete *Borrelia burgdorferi* sensu lato and carrier is Ixodes mites. LB spreads globally, but most often causing health problems in the northern hemisphere, including Ukraine. The LD population risk group includes 30-60 years old. Percent of infected women is the highest. Children are only about 10% of the total number of LD patients (*Nakaz MOZ Ukrainy № 218, 2005*). *Borrelia* can persist in the human body for up to 10 years (*Miklossy et al., 2004*). The antigenic heterogeneity of these bacteria can alter antigenic structure, inhibition of complement-dependent phagocytosis. L form transformation of *Borrelia* into cyst maybe one of those 31 factors that ensure long-term persistence of the pathogen and evasion of the immune response and development of chronic forms (*Zinchuk, 2010*). The pathogenesis of LD studied insufficiently. Pathological process developed after the suction of the mite and the entry of *Borrelia* into human skin, causing interaction with various factors of specific and nonspecific resistance of the macroorganism (*Wackernagel et al., 2005*).

LB develop in stages without clear identifier from one stage to another. LB can also mimicking a number of other diseases (*Centralized Information System for Infectious Diseases of the WHO Regional Office for Europe; Zinchuk, 2010*):

Stage 1 (local infection): at the tick bite place 80-90% of patients develop a local infection in the form of migrating erythema, develop flu-like symptoms, including fever, headache, arthralgia, myalgia. These symptoms can occur from a few days to weeks after infection. Migratory erythema is a reliable clinical marker of LB. At the same time, migratory erythema is reported only in approximately 25-50% of acute cases of LB.

Stage 2 (dissemination stage) occurs in few weeks, sometimes months. From the bite place the pathogen enters with lymph and blood into internal organs, lymph nodes and joints. It can also cause symptoms of damage of the cardiovascular and nervous systems.

Stage 3 (organs damage): may take months and years after the onset of the disease. This is a chronic form of LB when body develops persistent arthritis and chronic neurological symptoms. The chronic form has a recurrent nature with alternating exacerbations, asymptomatic and gradual progression of disease (*Bush et al., 2018*). The acute period of Lyme disease corresponds to a period of 1 to 3 months, sub-acute – from 3 to 6 months, chronic – when the persistence of symptoms of LB continue for more than 6 months. There is strong correlation between severity and duration of LD. Chronic infection can be in continuous and recurrent forms (*Bush et al., 2018*).

Clinical manifestations of LB is multidimensional and can affect multiple organs. LB can run with syntropic involvement in the pathological process of various patient's organs and systems, such as skin, musculoskeletal system, nervous system, heart, liver, eyes (Zinchuk, 2010). Therefore, the LD differs by stages and systemic manifestations.

4. Clinical manifestations of Lyme borreliosis

Central nervous system lesions in the acute period of LD. In this stage tick-borne borreliosis characterized by a predominant lesion of the nervous system, use the term “neuroborreliosis”. Statistical analysis of the LD cases with a predominant lesion of the central nervous system shows that during the acute period of the disease its main forms are meningitis and meningoencephalitis. Clinical research revealed a number of key features that are common for the meningeal clinical conditions of the disease – headache of varying intensity, nausea, vomiting, photophobia, increased sensitivity to light and sound, pain when moving the eyeballs (Nakaz MOZ Ukrainy № 218, 2005).

Lesions of the peripheral nervous system in the acute period of LD. Long-term studies of LD at different stages indicate that during the acute period of the disease in most cases there are neurological manifestations of lesions of the peripheral nervous system (Bremell et al., 2011; Wang et al., 2014; Kravchuk et al., 1992; Halperin et al., 1991). The variety of the peripheral nervous system lesions during the acute period of the disease can be described by two syndromes – algic and amyotrophic (Badalyan et al., 1994; Pachner et al., 1995). Algic syndrome manifested by neuralgia, myalgia, plexalgia, polyradiculopathy (Bremell et al., 2011; Wang et al., 2014, Kravchuk et al., 1992). Amyotrophic syndrome accompanied by segmental radiculoneuritis, sporadic facial nerve neuritis, mononeuritis in the area of bite, limb paresis, radiculalgia, plexalgia, mono- and polyneuritis, radicular sensory disorders in all parts of the spine (Bremell et al., 2011; Wang et al., 2014).

An amyotrophic syndrome in LB may develop own symptoms such as Bannwart's lymphocytic meningopolyradiculoneuritis with headache, fever, radicular pain, weakness and loss of sensitivity, which develops in approximately 15% of untreated patients (Wang et al., 2014). Neurological disorders appear after erythema is over. It manifested by pain in spinal nerves roots or cervical and thoracic spine lesions (Bremell et al., 2011). The meningeal symptoms are weakly expressed or can be absent (Halperin et al., 1991).

Lesions of the central nervous system in the chronic stage of neuroborreliosis. At the chronic stage of the LD, lesions of the central and peripheral nervous system are occurred with the same frequency (Matschke et al., 1987). The central nervous system lesions can be in a form of encephalopathy, encephalitis, encephalomyelitis, cerebrovascular neuroborreliosis (Mancardi et al., 1989; Reimers et al., 1992). At a chronic stage central nervous system damage can be in the form cerebral vasculitis (cerebrovascular neuroborreliosis). It takes 3-7 months from the beginning of the disease (Krupp et al., 1991; Kortela et al., 2017). This pathology characterized by moderate manifestations of meningeal and progressive psycho-organic syndromes (memory impairment, personality change), periodic ischemic disorders in various vascular associated areas, thromboembolism of the main vessels with the development of ischemic strokes or subarachnoid hemorrhage (Kuntzer et al., 1991).

Lesions of the peripheral nervous system in the chronic conditions of neuroborreliosis. Lesions of the peripheral nervous system in chronic LNB are mainly chronic radiculoneuropathy, polyneuropathy (Bremell et al., 2011). Months or even years after the onset of the disease, some patients may develop chronic polyradiculoneuropathy with sensory symptoms or

radicular pain. The pathology of chronic radiculoneuropathy reveals axonal degeneration with perivascular mononuclear infiltration (Wang *et al.*, 2014; Kravchuk *et al.*, 1992).

At the same time pains often observed in cervical, thoracic, lumbosacral area of a spine, radicular pains, paresthesias of extremities, lack of sensitivity both symmetrical, and unilateral (Badalyan *et al.*, 1994; Pachner *et al.*, 1995). Muscle atrophy can be in the areas of innervation of the affected nerves (Halperin *et al.*, 1991). Patients with chronic radiculoneuropathy often complain of radicular pain or distal paraesthesia in the extremities, less often – pain in the torso. Sometimes these manifestations are accompanied by muscle weakness (Pachner *et al.*, 1995; Halperin *et al.*, 1991).

5. Modern methods of diagnosing Lyme disease

A combination of clinical and epidemiological and laboratory results is recommended for the diagnosis of LNB. Patients with pre-existing migratory erythema and epidemiological risk may be diagnosed with acute LNB without laboratory tests. Laboratory tests are needed to confirm the diagnosis for all other patients, but their correct interpretation depends on the symptoms and duration of the disease.

However, a causal relationship between neurological symptoms and borreliosis infection cannot be easily established in patients with polyneuropathy / polyneuritis whose blood tests are positive for *Borrelia* (Lantos, 2015), as *Borrelia*-specific antibodies are detected in approximately 5-20% of healthy people. People depend on the endemicity of the region and age group (Izquierdo *et al.*, 1992).

Therefore, the causal relationship between neurological symptoms and borreliosis infection cannot be easily established for patients with polyneuropathy. Thus, the main symptoms of LNB are radicular pain, paresis of the extremities and facial nerve, meningitis. However, there are a large number of neurological symptoms that are less common and can be attributed to borreliosis infection only by appropriate studies of cerebrospinal fluid (CSF) (Johnson *et al.*, 2014).

Until now detection of antibodies to *B. burgdorferi* in CSF in patients with LB with signs of nervous system damage remains uncertain. The appearance of *B. burgdorferi* in CSF stimulate intrathecal immune response usually after 2 weeks of neurological manifestations. According to many authors, is one of the major diagnostic criteria for LNB (Izquierdo *et al.*, 1992).

There is another point of view that the absence of pleocytosis and intrathecal synthesis of antibodies to *B. burgdorferi* does not exclude LNB even in the long term (Johnson *et al.*, 2014). E. Roaldsnes *et al.* argue that the likelihood of LNB is low in the absence of typical symptoms of the disease, even when anti-*Borrelia* antibodies are detected in the serum.

Recently, the concentration of chemokine CXCL13 in the cerebrospinal fluid has been introduced as a new diagnostic tool for LNB. It is used to complement antibody-based diagnostic methods. Other cytokines have also been analyzed as diagnostic markers. According to the recommendations of the European Federation of Neurological Societies (EFNS), the following 3 criteria should be considered for a reliable LNB testing, and 2 of them – for a probable LNB (Cameron *et al.*, 2016):

- neurological symptoms;
- pleocytosis CSF (cerebrospinal fluid);
- *Borrelia*-specific antibodies produced intrathecally. Polymerase chain reaction (PCR)

may be confirmatory if the duration of symptoms is <6 weeks, when antibodies to *Borrelia* may be absent.

Otherwise, PCR is not recommended. There is also insufficient evidence to recommend the following tests for diagnostic purposes: microscopic analysis, chemokine CXCL 13, detection of antigens, immune complexes, lymphocyte transformation test, cyst formation, lymphocyte markers (Cameron *et al.*, 2016).

The use of such tests as seeding, PCR or detection of *B. burgdorferi* antigens is limited. As of today, there is no serological test that can distinguish between past and active LB disease. PCR sensitivity is 25-30% in early LB, and 10% in chronic LNB. The main disadvantage of PCR is the large number of false-negative results (Cameron *et al.*, 2016). Serological methods are based on the determination of a specific immune response to *B. burgdorferi* antigens. The most commonly used are the indirect immunofluorescence test (IDIF), enzyme-linked immunosorbent assay (ELISA), and immunoblot (Western-blot) (Kaya *et al.*, 2008; Spirin *et al.*, 2012).

A two-level antibody test, consisting of ELISA or RIF analysis followed by immunoblotting are available. It is widely used despite significant limitations in sensitivity, especially in early infection (30-40%) and in the convalescence phase after treatment with early LB antibiotics. A combination of clinical and epidemiological and laboratory research methods is effective in the LNB diagnosis.

6. Preventive and treatment strategies for patients with neuroborreliosis

To prevent LB, it is very important to remove ticks before they disappear. The risk of transmission of *Borrelia* increases with increasing bite time of the mite. Transmission does not occur immediately when ticks attach to the skin. There is a delay, which may depend on what type of *Borrelia* infects the mite. Ticks should be removed immediately with tweezers to prevent transmission of *Borrelia*. If parts of the suction organ remain in the skin, they can later be removed with a needle or curettage. If the head or suction organ remains in the skin, the risk of *Borrelia* transmission does not increase.

The bodies of nymphs and adult mites should not be compressed when they are filled with blood to prevent possible transmission of *Borrelia*. After removal of the tick, the patient should be informed of the need to monitor the site of the tick bite for the next 6 weeks (Cameron *et al.*, 2016).

Some studies have reported that the risk of infection after a tick bite can be reduced by a single prophylactic injection of 200 mg of doxycycline (87% efficacy) (Saccomano *et al.*, 2018). In this case, J. Piesman *et al.* experimentally found that doxycycline treatment on the day of removal of a potentially infected mite protected 74% of mice. When treatment was delayed until 24 hours after removal mites, only 47% of mice were protected. Prophylactic treatment was completely ineffective ≥ 2 days after tick removal. According to the authors, the dynamics of preventive treatment with antibiotics in mice may differ from the treatment of humans. Given the results of animal studies, the management of patients, however, should be approached with caution. The results suggest that antibiotic treatment for the prevention of LB is more effective if performed immediately after removal.

There is only a very narrow window for prophylactic treatment, which may be effective after mite removal (Saccomano *et al.*, 2018). Due to the possible effects on the intestinal flora and the risk of developing resistance due to frequent prophylaxis. Oral prophylaxis with doxycycline is not recommended in Europe. Currently, no vaccine is approved for the prevention of LB, although vaccination with recombinant LYMERix vaccine, which reduced the number of new infections in vaccinated adults by almost 80%. was approved in the United States in 1999.

But it was later withdrawn from the market by the manufacturer for economic reasons. This monovalent vaccine is not suitable for Europe because it protects only against *B. burgdorferi* sensu stricto and not against the *B. afzelii* and *B. garinii* genotypes that are more common in Europe. A polyvalent OspA vaccine developed in Europe, but it is not approved yet (*Middelveen et al., 2018*).

Today, all stages of LB are treated with antibiotics. Doxycycline, penicillin G, amoxicillin and ceftriaxone are the antibiotics of choice in the treatment of LNB. In the case of early LNB, doxycycline and beta-lactam (penicillin G, ceftriaxone and cefotaxime) antibiotics are equally effective in terms of regression of neurological symptoms and are tolerated equally. According to guidelines from the European Federation of Neurological Societies, adult patients with reliable or possible acute LNB (symptom duration <6 months) should be offered a single 14-day course of antibiotic treatment (*Mygland et al., 2018*). Oral doxycycline (200 mg / day) and intravenous ceftriaxone (2 g / day) are equally effective in patients with peripheral nervous system symptoms, including meningitis. Patients with manifestations of central nervous system damage are prescribed intravenous ceftriaxone (2 g / day) for 14 days; with late LNB (duration of symptoms > 6 months) – within 3 weeks (*Mygland et al., 2018*). It is reported that most patients have good results and symptoms disappear within 12 months regardless of the antibiotic used. There is evidence that doxycycline, penicillin G, ceftriaxone, and cefotaxime are effective in the treatment of European LNB.

D. Bremell and L. Dotevall evaluated the effectiveness of oral doxycycline in the treatment of LNB with central nervous system symptoms. The number of cerebrospinal fluid mononuclear cells was used as a surrogate marker of treatment outcome. The study included 26 patients with central nervous system damage and 115 patients with symptoms of peripheral nervous system damage. Treatment with oral doxycycline led to a similar decrease in the number of mononuclear cells in the cerebrospinal fluid of patients with LNB and symptoms of central nervous system lesions compared with patients with LNB with symptoms of peripheral nervous system damage. All patients with central nervous system lesions showed clinical improvement after treatment, although 62% had residual symptoms at the end of follow-up. The results indicate that oral doxycycline is an effective treatment for LNB, regardless of the severity of symptoms (*Bremell et al., 2014*).

R. Dersch et al. found a statistically significant difference between doxycycline and beta-lactam antibiotics in terms of residual neurological symptoms after 4-12 months of treatment in a systematic review of 16 studies. Significantly fewer neurological symptoms were observed after taking cefotaxime compared to penicillin. At the same time, side effects were significantly lower when prescribing penicillin (*Dersch et al., 2016*).

S. Rauer et al. argue that in the treatment of early LNB, oral doxycycline is well tolerated and its effectiveness is equivalent to the effectiveness of intravenous beta-lactam antibiotics (penicillin G, ceftriaxone and cefotaxime). In this case, 14 days is enough for the treatment of early, and 14-21 days – for the treatment of chronic LNB. Prolonged administration of antibiotics for many weeks or even months in chronic LNB with nonspecific symptoms has no additional benefit and creates a risk of serious side effects (*Rauer et al., 2018*).

According to A. Krause and V. Fingerle, early Lyme disease is almost always cured by a single course of antibiotics, which also prevents further disease progression. After antibiotic therapy of late manifestations of LNB, the symptoms disappear slowly, and remission is usually achieved in weeks or even months (*Krause et al., 2009*). Combination antimicrobial therapy or courses of antibiotics longer than 4 weeks in chronic LNB are not recommended (*Krause et al., 2009*).

Thus, early antimicrobial treatment is effective in most cases of LNB and most patients return to their pre-morbid health after the recommended treatment. However, despite targeted antibiotic therapy, persistent forms of LNB with manifestations of so-called “subjective” symptoms that can last for a significant period of time after treatment (for at least 6 months).

Thus, U. Koedel and H. W. Pfister emphasize the existence of nonspecific symptoms of LDL that remain despite conventional therapy: a syndrome called post treatment Lyme disease syndrome (PTLDS). IDSA has provided a formal definition of PTLDS, but its pathogenesis and even its existence need further elucidation. PTLDS is not associated with a specific genotype of *B. burgdorferi*. The authors note that these patients in most cases do not suffer from persistent *B. burgdorferi* infection and do not benefit from additional antibiotic therapy (Koedel *et al.*, 2017). There are currently no FDA-approved treatments for PTLDS. The safety and efficacy of non-recommended and / or adjunctive treatments have not been sufficiently studied and agreed by the medical community.

Both in vitro and in vivo, it has been found that antibiotic resistance and recurrence of LB are associated with biofilm-like formations of *B. burgdorferi*, *B. afzelii* and *B. garinii*, allowing *Borrelia* spp. to resist adverse environmental conditions, and indicating the possible role of the formed biofilm in the development of various manifestations of LB, including LNB. The prevention of LB is the use of personal protective equipment when visiting natural foci. It is important to remove ticks as early as possible. In some Studies have reported a reduction in infection through emergency prevention. Vaccination methods have not been definitively developed. The main treatment for LB is antibacterial therapy.

7. Conclusions

The question of pathogenetic mechanisms and risk factors for the development of pathology of the nervous system in chronic LB remains open. Nervous system compromised in LB is an urgent issue that requires improvement of methods of early diagnosis, treatment and prevention. The analysis of the literature suggests that a comprehensive research of nervous system damage at all stages of LB, urge the needs for further research.

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ENSURING THE STERILITY OF SUBSTITUTION THERAPY MEDICATIONS FOR DRY-EYE SYNDROME TREATMENT AFTER OPENING THE ORIGINAL PACKAGING

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Summary

The aim of the article is to study the assortment of the additive agents in the composition of dry-eye syndrome substitution therapy medications registered in Ukraine, which may increase the anti-microbial stability of the solution as well as types of packaging of preservative free substitution therapy medications.

The methodology of the research includes the content-analysis of the information on the substitution therapy medications composition, provided in the insert of the medication as well as the study of the type of original packaging and the way it influences the preservation of sterility and properties of the substitution therapy medications.

Provision of clear information in the labeling and the insert of the medication regarding the presence, name and quantity of a preservative (with the use of the term “preservative”) is a necessary and often one of the determining factors in treatment selection for patients with dry-eye syndrome. This is determined by the fact that certain agents (or their combination) may perform different functions in a medical form acting, depending on the, for instance, concentration, as preservatives, components of buffer solutions, antioxidants or isotonic substances.

The results of the study show that as of December, 2020 only a few of substitution therapy medications presented on the pharmaceutical market of Ukraine contain such information.

Keywords: eye medications, anti-microbial stability, preservatives, containers.

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1. Introduction

In the recent years the dry eye syndrome (DES) issue is becoming a global one. Dry eye syndrome is a civilization disease, which is characterized by a progressing and chronic nature (Craig *et al.*, 2017). The change of the “format of life” (online-learning, working in a distance format, increased duration of staying indoors, self-isolation etc.) leads to the increase of the share of people with the stated disease in the population, particularly, due to the increased time of the influence of ethiopathogenetic factors. Thus, the specialists should pay more attention to all the stages of treating patients (diagnosing, therapy) that visit an ophthalmologist with eye symptoms or even those who are under the influence of risk factors for DES development (Jones *et al.*, 2017).

DES is characterized by a chronic and progressing nature and includes the distortion of one or several layers of the tear film (aqueous, mucin, lipid). Thus, such processes as disorders in the production of tears, mucins and lipids; the tear evaporation time; tear film formation on the surface of the corneal epithelium underlie the pathogenesis of the “dry eye” syndrome (Bron *et al.*, 2017).

The use of preservatives in the composition of eye drops is considered to be one of the etiological factors of DES development. Namely, such a connection is confirmed by the results of the study of benzalkonium chloride (BAC) (Epstein *et al.*, 2009; Makarenko *et al.*, 2015). According to the research data, the BAC toxicity largely manifests itself on the surface of the eye, in the conjunctiva and corneal epithelium. At the same time, BAC practically does not penetrate into the aqueous humour during the short-term application. The level of BAC toxicity for the ocular surface is directly proportional to the degree of damage to the ocular surface, the duration and frequency of instillations (Elmer, 2014).

Moreover, it states that the application of benzalkonium chloride on the ocular mucous membrane leads to the shortening of the tear film break-up time, which may considerably distort the results of the study among patients with DES (Jones *et al.*, 2017).

DES therapy is aimed at the treatment of ocular symptoms through the correction of the detected quantitative and qualitative disproportions of the tear film layers (Bron *et al.*, 2017; Jones *et al.*, 2017).

DES is generally classified by a combination of symptoms and signs. Judging by both symptoms and signs, DES may be light, medium or severe, however, symptoms are domineering in the diagnosing process (McMonnies, 2021; *Syndrom sukhoho oka. Klinichna nastanova, zasnovana na dokazakh*, 2019).

Eye medications designed as substitution therapy for DES are presented on the pharmaceutical market of Ukraine in liquid and soft forms (Derzhavnyy reyestr likars'kykh zasobiv Ukrayiny, 2019; Derzhavnyy reyestr medychnoyi tekhniki ta vyrobiv medychnoho pryznachennya, 2019; *Dovidnyk likars'kykh zasobiv Kompendium*, 2019). According to the requirements of the State Pharmacopoeia of Ukraine, the production of such medications is carried out with the use of materials and methods that ensure the sterility and prevent microbial contamination. Airtight containers with the control of the first opening must be the original packaging for eye disorders medications (Derzhavna farmakopeia Ukrainy 2-e vyd, 2015).

In case eye medications are packaged in single-dose containers, it is not necessary to include additive agents that would ensure the sterility after the opening of the original packaging (Derzhavna farmakopeia Ukrainy 2-e vyd, 2015); Marx & Birkhoff, 2010; Marx & Birkhoff, 2015).

While developing eye medications that are sold in multi-dose containers, antimicrobial preservatives may be added to their composition with an obligatory mention of the name of each of them on the label or some special corking tools for the containers may be used (Derzhavna farmakopeia Ukrainy 2-e vyd, 2015).

Purpose

The purpose of the article is to study the assortment of the additive agents in the composition of DES STMs registered in Ukraine, which may increase the anti-microbial stability of the solution as well as types of packaging of preservative free STMs (single-dose containers and reusable vials sealed with specific corks and mechanisms to ensure the sterility of eye drops after the original package is opened).

The methodology of the research includes the content-analysis of the information on the STM composition, provided in the insert of the medication (instruction for medical application

of a medication, instruction on the use of the medication and instruction on the use) as well as the study of the type of original packaging and the way it influences the preservation of sterility and properties of the STMs. In addition, in order to detect whether the producer indicated the presence / absence of a preservative in the composition of a DES STM, the article analyses the information, provided on the labeling of the original packaging as well as on the secondary packaging of the group of medications. To update the information on the assortment of STMs that are present on the national pharmaceutical market, we have compared the data received in 2019 and the indices of the 4th quarter of 2020.

2. Market Dynamics of DES STMs

According to the marketing analysis of STMs presented on the pharmaceutical market of Ukraine as of the 3rd quarter of 2019, 11 medications of Group S01X A20 “Artificial substitutes of the tear liquid and other neutral medications” and 24 medical products: 1 multi-purpose solution, 16 products for ophthalmological use and 7 solutions for washing, irrigation, treatment, which are presented in 4 drug forms (eye drops, eye gels, solutions, emulsions) (*Kryvoviaz & Tomashevskya, 2019*).

As of December, 2020, the market expanded due to the occurrence of 12 STMs, 10 and 15 ml in volume in multi-dose containers, of which 7 are registered “Medical products. Products for ophthalmological use” and 5 as “Medical products. Solutions for washing, irrigation, treatment”. Thus the increase in physical terms is 25.5%. While segmenting them by the drug form and producing country it has been determined that 11 of them are eye drops of foreign production and 1 is an ophthalmological solution produced in Ukraine (Fig. 1).

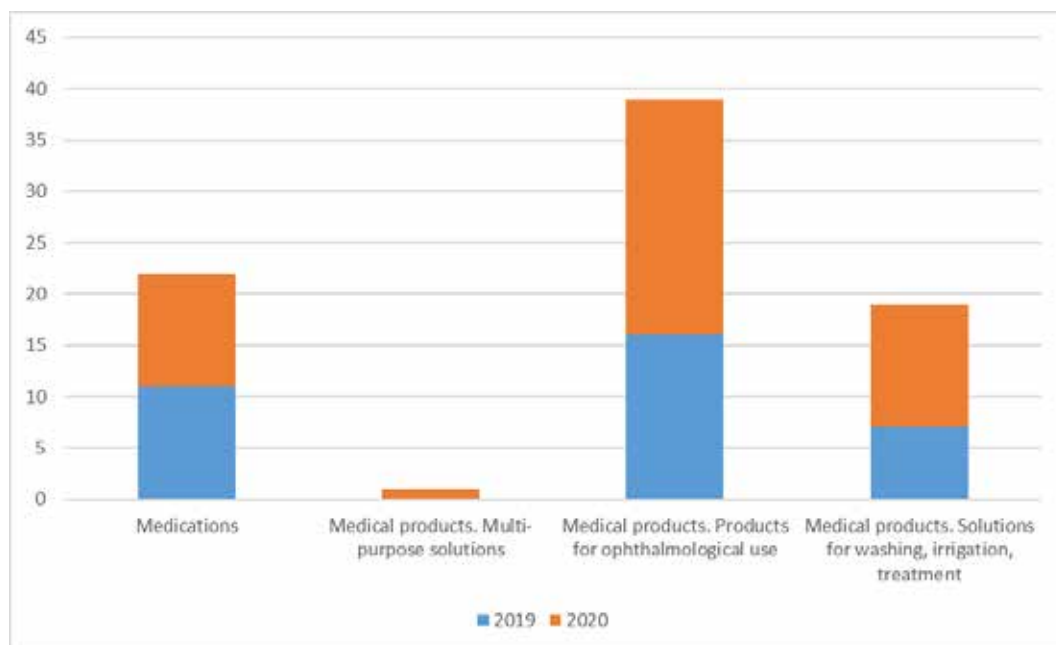


Fig. 1. Quantitative Indicators of the Pharmaceutical Market of DES STMs in Ukraine

3. Ways of ensuring sterility of substitution treatment medications

The most widespread way of ensuring the sterility after the opening of original packaging of DES STMs is adding preservatives to their composition. Among the additive agents of this group, which have been detected in the course of the analysis of the composition of DES STMs that are present on the pharmaceutical market of Ukraine, there are both organic and inorganic ones, which by the class of chemical compounds belong to the Quaternary ammonium compounds or oxidants (Fig. 2).



Fig. 2. The structure of oxidants and quaternary ammonium compounds used as preservatives of DES STMs

The inorganic antimicrobial preservatives are mainly presented by boric acid.

The representatives of preservatives-oxidants are sodium perborate (SUPEROPTIK AKVA eye drops 5 ml vial, No.1, 2) and stabilized oxychloro-complex (OPTIVE® eye drops 3 ml, 10 ml, 15 ml in dropper vials No1, LUXIAL PLUS eye drops 10 ml, No.1, FLORA VISION dry eyes eye drops 15 ml, No.1, VIAL'® SLIOZA drops 10 ml polyethylene vial, No.1).

However, Quaternary ammonium compounds are most frequently used as a preservative in STMs. Namely, these are benzalkonium chloride (VISILOTON OPHTHALMOLOGICAL MEDICATION 10 ml, No.1, HYPROMELOSA-P, eye drops 0.5% container-dropper, 10 ml, No.1, OFTAGEL® eye gel, 2.5 mg / g, 10 g vial, 1 vial in a cardboard box, OFTOLIK eye drops of 5 ml or 10 ml in a plastic dropper vial, 1 dropper vial in a cardboard pack, OMK1 eye drops vial 10 ml, No.1, OMK2 eye drops vial 10 ml sterile, No.1), cetyltrimethyl ammonium chloride (KATIONORM KRAPLI OCHNI 10 ml emulsion, No.1), cetrimide (ARTELAK® eye drops, solution, 3.2 mg / ml 10 ml in a dropper vial; 1 dropper vial in a box, VIDISIK eye gel 0.2% 10 g in a tube; 1 tube in a cardboard box, SIKAPOС eye gel, 2 mg / g 10 g in a tube, 1 or 3 tubes in a box, KERATOSTYL eye drops 10 ml in a vial), polyquaternium

chloride (TYRS natural II med. 15 ml, SYSTEIN BALANS ZASIB DLIA ZVOLOZHENNIA OCHEY 10 ml, No.1, SYSTEIN ULTRA ZASIB DLIA ZVOLOZHENNIA OCHEY 10 ml vial. No.1, ZASIB D/ZVOLOZHEN. OCHEY SYSTEIN 10 ml vial, No.1, EYE MOISTURIZER SYSTEIN® gel solution 10 ml No.1, ARTIFICIAL TEARS eye drops 5 ml or 10 ml, or 15 ml in a "Drop-Tainer®" dropper vial; 1 dropper vial in a cardboard box).

However, it has been determined that some STMs, which according to their package inserts (instruction for medical application of a medication, instruction on the use of the medication and instruction on the use) do not contain preservatives, contain agents that have the ability to increase the microbiological stability of a solution under certain conditions. Such agents in the STM composition are boric acid, polyhexanide, citric acid, N-hydroxymethylglycinate, edetate sodium, trilon B, enoxolone glucuronide.

DES STMs that do not contain preservatives in their composition and are packaged in vial for multiple use have specific corking tools to ensure the sterility and preservation of the properties of the eye drops after the opening of the original packaging. The AVAK filtrating membrane in the form of a multi-dose patented vial is used for packaging the TEALAZ® DUO ROZCHYN OFTALMOLOHICHNYI 10 ml vial, sterile, No.1. In addition, the ophthalmic squeeze dispensers (OSD) are widely used (UNITIRS eye drops 10 ml vial, No.1, GILAYS, sterile moisturizing ophthalmic solution with sodium hyaluronate 0.4%, ophthalmic solution sterile 0.4% vial 10 ml, No. 1, OFTALGERD eye drops 10 ml, No.1, OFTASSIALE eye drops 10 ml, No.1, SAFLOGIAL eye drops 10 ml, No.1, UMASTAR eye drops 10 ml, No.1), airtight pumps (ARTELAK® SPLESK POZCHYN ZVOLOZHUYUCHYI DLIA OCHEY I KONTAKTNYKH LINZ 0.24 % solution, 10 ml vial, No.1, KHILO®-KEA eye drops 10 ml multi-dose container with a pipe and a cap, No., VET-KOMOD eye drops, 20 mg/ml 10 ml in a multi-dose plastic container, equipped with an air-tight pipe; 1 container in a card box, KHILO-KOMOD eye drops 1 mg/ml, 10 ml in a multi-dose container, equipped with an air-tight pipe and closed with a cap, 1 container in a card box, KHILO-KOMOD FORTE eye drops, 2 mg/ml, 10 ml in a multi-dose container, equipped with an air-tight pipe and closed with a cap, 1 container in a card box) and others.

Thus, the detected ways of ensuring the STM sterility after the opening of the original packaging include:

- adding preservatives;
- packaging in single-dose containers;
- using special corking tools.

National producers use all of the above mentioned ways of ensuring the sterility of DES STMs after the opening of the original packaging. However, the most often way is adding preservatives (3 medications), whereas the use of special corking tools and single-dose packaging is used for only 2 STMs.

The STMs that are produced abroad also use all of the ways of ensuring the sterility after opening the original packaging that are outlined in the State Pharmacopoeia of Ukraine; single-dose packaging – 1 medication, use of special corking tools – 14 medications, adding preservatives – 18 medications.

4. Conclusions

Provision of clear information in the labeling and the insert of the medication regarding the presence, name and quantity of a preservative (with the use of the term “preservative”) is a necessary and often one of the determining factors in treatment selection for patients with DES. This is determined by the fact that certain agents (or their combination) may perform different

functions in a medical form acting, depending on the, for instance, concentration, as preservatives, components of buffer solutions, antioxidants or isotonic substances.

The results of the study show that as of December, 2020 only a few of STMs presented on the pharmaceutical market of Ukraine contain such information.

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TECHNOLOGY, CREATIVITY, IMPLEMENTATION

MOTIVATION AS A DETERMINANT FACTOR IN PERFORMANCE

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Summary

The problems of staff motivation are considered in the paper. Motivation is a process of influencing the human worker occupies an important place in the system of enterprise management, personnel management, and labor management.

The purpose of the paper is to substantiate the need to motivate employees to work effectively, using a systematic approach to the choice of tools to influence the person as a subject of labor.

The essence of motivation is defined as a set of motivating reasons, factors under the influence of which the employee acts in a particular situation. The role of needs, interests, values, and motives in creating the conditions for effective work, which necessarily includes the quality of work, is substantiated. Moreover, in modern conditions, effective quality work is decent work. The main approaches to the definition of “motivation” are given and the essence of the material and intangible motivation in the enterprise is revealed. The necessity of a systematic approach to the formation of types of motivation, needs, motives, incentives, a modern worker who seeks not only material prosperity but wants to engage in interesting, meaningful work, to enjoy it. Characterizing the basic theories of motivation, the authors substantiate the possibility of their use in practice to create conditions for effective work in the enterprise. Motivation is seen as a factor of work efficiency.

Keywords: labor efficiency; decent work; needs; interests; motives; incentives; work results; labor behavior.

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1. Introduction

The 21st century sees work as the basis of economic growth and human development, as decent work. Work that is productive in conditions of freedom, equality of security, and respect for human dignity. Decent work provides a fair wage, safety in the workplace, quality social protection for the employee and his family members. It promotes the personal development of the worker, gives him freedom in working life, provides high results of individual and

collective activities. Effective work is focused on the high performance and quality characteristics of the employee. Effective quality work is primarily determined by the physical, intellectual abilities of man, which characterize the level of his competence, ability to perform work of a certain type, and complexity.

Moreover, quality work as a component of effective work is a sign of work, which affects the results of the implementation of labor functions of the employee and the achievement of goals set for themselves by the employee and the company.

The result of labor and labor costs in terms of labor efficiency must be optimal to ensure a sufficient level of competitiveness of the enterprise, products, works, and services. The employee must be interested in ensuring the optimal level of productivity and the appropriate level of labor intensity, savings, material resources, increasing the ability to work, its content, responsibility, job satisfaction, work in general. In this case, motivation is one of the most important types of management activities that motivate the employee to work, to achieve a certain goal of work and enterprise. Motivation, according to experts, is a function of involving staff in more efficient work.

2. The meaning of the concept of personnel motivation

Competition and its strengthening determine the special role of motivation in modern conditions. This role is to form and use the reserves of the organization to improve quality, efficiency, job satisfaction. On this basis – the creation of conditions to improve the welfare of employees, their self-realization, and development. The maximum return on the use of personnel, which provides increased productivity, the profitability of production, and the operation of the enterprise, is the main purpose of motivation.

Effective personnel management, human labor is associated with understanding human needs. Only by knowing what motivates a person to action, what motives underlie his activities, you can find methods of motivation. Only by understanding and knowing what motivates the employee to certain actions in the process of work, you can form approaches to motivate effective work. Motivation for work is a very complex process, so there are many definitions of motivation.

Kibanov A.Y. considers motivation as a process of a conscious choice by a person of a particular type of behavior, which is determined by the complex action of external (incentives) and internal (motives) factors. Vikhansky OS offers the following definition: “A person's motivation to act is understood as a set of driving forces that motivate a person to perform certain actions.” According to Vesnin V.R., motivation includes the inner state of man, and what is outside him, defined as an incentive or task. Tsvetaev V.M. considers motivation as a process of activating the motives of employees and creating incentives to encourage them to work effectively. In the work of Meskon M., motivation is defined as the process of motivating employees to work to achieve the goals of the organization (*Kolot, 2008*).

Thus, summarizing the different approaches, we can determine that motivation is a process that, under the influence of a combination of external and internal factors, motivates the worker to certain actions based on the purpose of the enterprise. Among these factors are human needs and interests, social and value attitudes, expectations, and most importantly – the individual position of the employee as a person to certain situations, phenomena, factors. The incentives used by the organization where the person works deserve special attention. Based on this, the effective motivation of the employee requires the optimal ratio between the means of internal and external motivation. According to experts, the

system of motivation should be specific, adapted to the conditions of a particular organization (Maslova, 2019).

Also, it should be borne in mind that the basis of motivation of the individual employee and the workforce are the needs, interests, abilities, desires, expectations, values. Therefore, the influence of motivation on human behavior in work depends on many factors, which makes it possible to identify the needs – material, labor, and status motivation; by methods of use – regulatory, coercive, stimulating; by sources of origin – external, internal; by a focus on achieving the goal – positive and negative.

In the system of labor management, personnel, first of all, pay attention to material motivation, which is the desire for well-being, high standard of living and depends on the employee's income level, its structure, income differentiation, the efficiency of material incentives used in the enterprise. Work motivation is directly related to work, its content, organization of work, and its mode. Such motivation is generated by the enterprise itself and is internal. In modern conditions, its role is very important because a modern worker is satisfied only with a high salary. He feels the need for meaningful, interesting, useful work, prospects for career growth, self-esteem if the results of his work are high quality and highly valued. Work motivation is related to the level of content, the usefulness of work, as well as self-expression, self-realization of the employee.

The desire to become a specialist, a professional, to enjoy a certain authority, and to occupy a certain place in the workforce, family, society is directly related to status motivation. It is the inner driving force of human behavior, associated with the desire for a higher position, more complex and responsible work, which is prestigious, both in the enterprise and in society. A person – a worker striving for leadership in work, the team, wanting a higher unofficial or official status, gets more pleasure from work. And the work becomes more productive and efficient.

Given the characteristics of each member of the workforce, the capabilities of the enterprise must optimally combine measures to implement labor, material, and status motivation. It should use a set of ideological psychological actions, namely: persuasion, informing; within the normative motivation. Under certain conditions, practical activity justifies the use of power to motivate the employee to the desired labor behavior for the company. That is, sometimes coercive motivation is necessary. Incentives are a special set of measures that are an integral part of motivating a person to a certain work behavior through external circumstances, rather than specific actions on the employee. Here we are talking about certain benefits – incentives, such as wages, bonuses, surcharges, the prestige of the profession and work, gratitude, the possibility of self-realization.

From the point of view of conditions for effective work, the most relevant should be the stimulation of labor itself, increasing the content of labor, improving working conditions, enriching labor. Incentives should be considered as an indirect type of motivation, the basis of which is the action of external factors. As for external and internal motivation, they are closely related and cannot be distinguished. In various work-related situations, motives arise and are formed for both internal and external reasons.

In practice, managers should use the influence of all types of motivation on the employee. Material incentives, especially important, prestigious work, trust in the employee and his responsibility – all this has a positive effect on the subject of work and his attitude to work, work and is a positive motivation. However, motivation can be negative, when to achieve the desired result, various sanctions are used – financial penalties, reduction of social status in the team, psychological isolation of the employee, demotion. However, they must be understandable and communicated to all employees (Goncharov, 2008: 68–71).

3. Methods of studying the motivational sphere

Formation of internal motivating forces for human labor behavior; the choice of external forces related to the stimulation of labor, requires effective management of motivation to determine the requirements for the employee in the process of work; desired, in terms of achieving the goal of employment and enterprise, expectations from him. This is the need to apply and combine different approaches, content, tools of motivation theories in practice. Modern theories of motivation are considered in terms of substantive and procedural theories, which are constantly evolving and improving.

Substantive theories are based on the study of human needs, which are the main motive for activity. Proponents of this approach are Abraham Maslow, K. Alderfer, David McClelland, Frederick Herzberg, and others. According to Maslow's hierarchy of needs, the basis of motivation is needed that need to be constantly studied. Its proponents believed that the subject of psychology is behavior, not human consciousness. Behavior is based on human needs, which can be divided into 5 groups: self-expression, respect, communication with people, the need for security, physiological needs. In presenting his theory of ERG (existence, relations, growth), Clayton Alderfer also assumes that all the variety of shell needs can be divided into groups. In contrast to Maslow's hierarchy of needs, Alderfer believes that it is sufficient to distinguish three such groups: the needs of existence, the needs of communication, the needs of growth. These needs groups are also arranged in a hierarchical sequence. However, according to Maslow's hierarchy, the hierarchy assumes a movement from need only from the bottom up (satisfied the need of a lower level, moved to a higher level), while Alderfer can move in both directions. The desire for success, the desire for power, for recognition is the need of the highest level according to the theory of McClelland. These needs motivate a person to occupy senior positions in the organization. Frederick Herzberg created a two-factor model that explains the influence of material and non-material factors on employee motivation and job satisfaction.

In contrast to substantive theories, procedural theories are about the distribution of efforts of employees and the choice of a certain type of behavior to achieve specific goals. Such theories include W. Vroom's model of motivation, the theory of justice, and the Porter-Lawler theory or model. To motivate work according to Vroom's theory, the employee must have such needs that may be largely satisfied with the expected rewards. In turn, the manager must meet the expected needs of the employee through a system of incentives. The theory of justice makes it possible to assess the effectiveness of motivation by comparing the employee's system of rewards received by other employees, with the number of his incentives. L. Porter – E. Lawler's theory of motivation is based on a combination of elements of the theory of expectations and the theory of justice, the relationship between reward and results is introduced. There are other theories, but one way or another the vast majority of authors (Adamas, Lawrence, Vroom, Griffin, Hackman, Oldham, and others) conclude that motivating factors, needs, and expectations exist in parallel and do not contradict each other, and complement each other. one, and for each individual the combination of motivational factors and needs is unique (*Kibanov, 2009: 234*).

Thus, meaningful theories express a certain view of motivation, confirmed by empirical research and focus on the analysis of the factors underlying motivation, and pay little attention to the analysis of the motivation process, which is the main disadvantage of all meaningful theories of motivation. Procedural theories do not dispute the existence of needs but believe that people's behavior is determined not only by them. All the above theories, one way or another,

prove that motivation gives a person a certain purpose. Achieving the set goals provides personal restoration of physical and social balance and makes a person more confident and successful, answers the question of what a person works for.

4. Analysis of the proposed measures

The development of science, technology, the introduction of new technologies increasingly complicate the work performed by employees; and contribute to the enrichment of labor, which requires improving the humanization of labor, minimizing the negative consequences of labor for humans. This, in turn, helps to increase job satisfaction, productivity, and efficiency. As for the motivation of work, in modern conditions, the basic ideas of substantive and procedural theories find their practical use. The study and application of the provisions of the theories of Maslow, Alderfer, McClelland, Herzberg, and other followers of content theories makes it possible to implement in enterprises sound programs for the formation and development of the capacity of each employee and labor organization; programs to involve employees in management; to develop non-traditional forms of organization of working hours, creation of the Bank of working hours. The development and improvement of procedural theories, the use of their ideas have formed the perceived human worker as a person who has their characteristics, vision, expectations, perception of a particular work situation, needs, behavior. On this basis, the dependence and relationship between the level of job satisfaction and work efficiency were formed. To ensure this sustainable direct dependence in practice, material incentives are widely used; motivation by meaningful, creative work; participation of employees in enterprise management; various awards and recognition of achievements; training and encouragement of staff development.

Today, every employee, every company requires high dedication and quality of work, which is associated with competition for market space, for the consumer, and their financial well-being. Therefore, motivational monitoring as a system of constant monitoring, control of the state of motivation in the enterprise becomes relevant. Prompt diagnostics, evaluation, and high-quality timely management decisions will increase the efficiency of work and production in general. According to experts, in this regard, it is advisable to study:

- motivation based on basic needs. The purpose, in this case, will be to direct the efforts of the employee to the realization of certain values of labor. For some employees, material incentives are attractive, for others moral;
- attitude to work. Through sociological research determine the motives that are most attractive to the employee in terms of the main place of work, additional (if any);
- motives that motivate to work. This approach involves a quantitative assessment of indicators of economic and social efficiency, wage efficiency;
- motives that shape the labor behavior of the employee and staff in general. – motives that shape the labor behavior of the employee and staff in general.

5. Conclusions

The staff of the enterprise, each member of the labor collective must consider, perceive their work, work, understanding that the basis of a socially-oriented society and economy is a humanistic approach, humanization of labor, social dialogue, and industrial democracy. In practice, this means enriching labor, increasing its content, achieving a compromise of interests in the field of labor and social relations; optimizing relations based on social partnership;

increasing the role of staff. Fair wages and their effective organization at the enterprise and the state level; attractive and creative work, which requires the responsibility of the employee for the results, characterizes the high level of his activity and innovative nature of work; a person's desire to be an expert in his field, to enjoy respect, authority, to be a leader – the factors that affect a person's attitude to their work, form its perception as one of the most important needs in life. This, in turn, provides increased job satisfaction, which will improve the result of work and create conditions for the economic and social efficiency of work.

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WAYS OF IMPROVEMENT OF ECOLOGICAL POLICY IN THE ACTIVITY OF MOTOR VEHICLES TECHNICAL SERVICE COMPANIES IN UKRAINE

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Summary

The purpose of the article is revealing the basics of environmental policy formation at technical service companies. The article considers the peculiarities of the concept of environmental policy, its goals and objectives; identifies the ecological aspects of activity of the company of technical vehicle service, the most essential of them; it shows the role of the management of the company in implementation of ecological policy. The ecological policy of the company is realized through its performance of ecological function. That is, the introduction of a system of measures aimed at improving the ecological condition of the environment. By pursuing a clearly defined and effective environmental policy, the company, if not enlarging, but shall increase its profits.

It is proved that the development of an effective environmental policy is one of the first and most responsible steps in creating an environmental management system at the company of technical service. It plays an important role in determining the priorities of the company and should have specific environmental goals and objectives. In fact, environmental policy determines the degree of environmental responsibility and the extent of the obligations of the company of technical service to the environment, according to which all its subsequent actions will be evaluated.

Keywords: ecological safety, environment, company of technical service, ecological aspects, ecological policy.

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1. Introduction

In modern conditions, there is an increased interest of companies of technical service of motor transport to the introduction and certification of environmental management system in accordance with ISO 14000. An important step in the formation of the environmental management system at the motor vehicles technical service companies is the development of environmental policy, which determines the main direction of its activities in the environmental field in the long run and, ultimately, ensures the achievement of environmental goals and objectives.

2. Analysis of recent researches and publishing

Problems related to the development and implementation of environmental policy at companies in various sectors of the economy have been studied by such well-known foreign

and domestic scientists as O. Balatskyi, T. Halushkin, A. Enders, R. Yefremova, L. Zhubanova, V. Ihnatov, A. Kokin, L. Melnyk, Yu. Satalkin, S. Khamzyna, A. Khachapurov, V. Shevchuk, I. Yaremchuk, M. Yatskiv and others. At the same time, despite numerous scientific investigations, the issues of development and implementation of environmental policy at technical service companies remain understudied.

Purpose of the article is revealing the basics of environmental policy formation at technical service companies.

3. Main material

The ecological policy of the companies is implemented through its performance of ecological function. Thus, according to the current legislation of Ukraine and its ratified international standards (ISO 9000 and ISO 14000), the concept of "environmental policy" is defined as follows – it is "the general intentions and focus of the company on its environmental characteristics, officially declared by top management" (DSTU ISO 14001:2015). That is, it is a certain system of measures aimed at improving the ecological condition of the environment.

Yu.V. Babina defines the environmental policy of the company as a set of generally declared principles and obligations related to the environmental aspects of the company, providing a basis for establishing and achieving its own environmental goals and objectives (*Babina, 2017:33*).

Unfortunately, a significant number of business leaders still believe that the development and implementation of environmental policy reduces the company's profits, as it requires significant investment (and thus increase costs, and profits do not reach their maximum level). However, we believe, this is a false statement, because it is through a clearly defined and effective environmental policy that the company, if not maximized, will increase its profits, that's for sure.

V.V. Savran notes that the leveling of environmental problems, on the contrary, leads to negative externalities in the environment, which, in turn, has a negative impact on the functioning of the company and reduces its profits. And this happens for the following reasons:

firstly, the increase in emissions into the atmosphere (or into the surrounding water bodies) increases the morbidity of workers and their families, and as a result the payments increase for hospital payments and the release of the required number of products or services. And even if the employee continues to work, in an unfavorable environmental situation, its productivity will decrease, and in the long run there may be a situation where the descendants of these workers will be unable to work at all, and the company will have to attract labor from other regions. to increase costs;

secondly, the introduction of more environmentally friendly production will reduce the risk of accidents, reduce depreciation of fixed assets and increase their useful life;

thirdly, the quality of products and services of the company will increase and as a result – consumer loyalty will increase, and consequently, sales will increase (the result is an increase in production, cost reduction and profit maximization);

fourth, for foreign investors, the important factor is that the company is socially responsible and implements a certain environmental policy. Therefore, they will be more willing to invest in such companies (and these funds, in turn, can be used to modernize and further expand production) (*Savran, 2017*).

O.V. Bohuslavskyi adds that in the conditions of high technology development a modern company needs to use environmental policy in order to demonstrate its own environmental responsibility and environmental security (*Savran, 2017*).

O.V. Barabash, studying the activities of companies of technical service of motor transport, noted that in order to justify and start implementing environmental policy at the company, it is necessary to consider the input parameters of the technological process – waste, emissions, water, electricity, gas, gasoline, diesel fuel etc., as well as the initial parameters of the system of the technological process – compliance with the limits of use of water, electricity, gas, gasoline, diesel fuel, compliance with the MPC in the formation of emissions, waste (Barabash, 2010:72).

Based on the input and output parameters of the process system O.V. Barabash identified ecological aspects of activity of the company of technical service of motor transport and created their register – the table 1.

Table 1

**Ecological aspects of activity of companies of technical service
of motor transport (Barabash, 2010:73).**

Activity, process, service	Aspect (terms of formation)	Environmental impact
1	2	3
Replacement of rechargeable batteries	Sulfuric acid leakage, evaporation of sulfuric acid vapors, irrational use of water resources	Soil and water pollution, air pollution, depletion of water resources
Welding metals	Accumulation of welding wire, release of pollutants into the atmosphere	Soil pollution, accumulation of solid waste, air pollution
Maintenance of engine engines, including boring, grinding, honing of engine cylinders and boring of crankshafts	Release of pollutants into the atmosphere, waste generation	Atmospheric air pollution, soil pollution
A set of works on wheel replacement, installation and dismantling of tires	Accumulation of used tires	Contamination of soils with used tires, irrational use of land plots.
Body repair	Formation of solid waste, metal dust, use of water resources	Soil pollution by scrap metal – metal ingress into the soil, accumulation of scrap metal, air pollution, depletion of water resources
Repair of vehicles	Waste generation	Contamination of soils with scrap metal and harmful substances
Technical inspection of motor vehicles	Waste generation	Contamination of soils with consumables
Repair of bus parts	Solid waste generation, use of water resources	Contamination of soils with metal shavings and scrap metal, depletion of water resources
Priming and painting of vehicles	Formation of solid waste and paint vapors entering the air, use of water resources	Air pollution, soil pollution by waste from paints, depletion of water resources

Table 1 (Continued)

1	2	3
Vulcanization of damaged tires and cameras	Formation of solid waste and vapors of glue and heated rubber	Soil and air pollution
Disassembly and repair work, assembly, control and test of the check point, steering, brake system units	Evaporation of crankcase gases, leakage of oil and lubricants, formation of solid waste	Atmospheric air pollution, soil and water pollution
Check of vehicles for serviceability by a smoke meter and a gas analyzer	Excessive emissions of exhaust gases into the atmosphere	Atmospheric air pollution

Based on these tables, we distinguish four groups of environmental pollutants as a result of the activities of the company of technical service of motor transport:

- emissions of harmful substances from exhaust gases;
- ingress of chemical elements into the air due to welding and other works;
- losses of substances used in production processes;
- waste generation;
- wastewater is contaminated with chemical compounds.

Based on the definition of such significant environmental aspects, the company of technical service of motor transport should develop its environmental policy, because it, in accordance with the nature and scale of the impact of production activities on the environment, determines the most important environmental aspects of technical service, and includes goals and commitments. in the field of its constant improvement and prevention of pollution.

The environmental policy of the technical service company is based on the following principles and obligations. (*Semenova, 2012:102*):

- rational use of resources;
- priority of planned and implemented actions and measures related to prevention (prevention) of impact on the environment, before measures and actions to minimize and eliminate the consequences of such impact;
 - health and safety of the personnel of the company of car service and the population;
 - consistent continuous improvement of characteristics and indicators of impact of the carried-out activity, production and services on environment and consumption of resources with orientation on the level of development of technics and technology and a condition of development of a society formed at a concrete stage of scientific and technical progress;
- mandatory compliance with the requirements of environmental legislation, including international agreements, Ukrainian state and local legislation, sectoral regulatory requirements, as well as other regulatory requirements governing the activities of technical service companies;
- adoption and implementation of any management and production decisions, taking into account the environmental aspects of future activities, products and services provided;
- consistent involvement and motivation (training, encouragement, responsibility) of all staff in environmental activities;
- informing and maintaining an open dialogue with all interested in the environmental aspects of the technical service company and the results of the assessment of its impact on the environment;
- understanding the priorities of systemic environmental management in the field of environmental protection and the desire for consistent implementation of international management standards.

Yu.O. Nikolaev names the main purposes of ecological policy of the companies of technical service (*Nikolaiev, 2008:140*):

- achieving a level of environmental safety that meets the performance of the best companies;
- increase of ecological safety of the company, decrease in influence on environment at the expense of increase of reliability, maintenance of safe and trouble-free work of the technological equipment;
- prevention and minimization of quantity and toxicity of emissions, discharges of pollutants and wastes at increase in production volumes at the expense of introduction of new technologies, the equipment, materials and increase of level of automation of management of technological processes;
- introduction of effective technical solutions and technologies to minimize and eliminate the level of environmental pollution.

In modern conditions the ecological policy of the companies of technical service of motor vehicles should correspond to their scale and the nature of influence on environment. Among the set of measures, the environmental policy of such an company should include statements about the compliance of its activities with environmental standards, the sustainable improvement of the environmental management system, as well as measures to prevent pollution.

L.A. Mochalova adds that the following factors should be taken into account in the framework of environmental policy (*Mochalova, 2008:207*):

- regional and local conditions of activity;
- assessment and reduction of any negative impacts of the technical service company on various aspects of the environment (land, water, air, flora and fauna, etc.);
- energy management, resource conservation and energy selection;
- management of use of raw materials, optimization of a choice of its kind and conditions of transportation;
- management of use and protection of water resources;
- reduction of waste generation, their secondary use, transportation and utilization of waste;
- assessment and reduction of intensity of harmful physical influences in the territory of the company and outside it;
- selection of new production processes and changes in existing production processes;
- planning of products/services (design, production, packaging, transportation, use and disposal of waste) from the standpoint of environmental protection;
- determining the impact of the practical activities of contractors, subcontractors and suppliers on the indicators of environmental degradation;
- prevention and restriction of emergency situations;
- ecological education and training on environmental issues;
- external information on environmental issues.

The environmental policy of each technical service company of motor transport should be developed independently and periodically revised taking into account results of checks, audit and the analysis. The ecological policy of the company is made out in the form of the document which is brought to the notice of all employees of the company and is accessible to the public.

The top management is responsible for the development and adoption of the environmental policy of the company of technical service of motor transport. As a rule, the implementation of environmental safety policy is carried out either by the director himself or directly by the person authorized in the field of environmental protection (technical director, chief engineer, etc.). The head of the technical service company (*Shvydanenko, 2017:69*):

- organizes development, provides implementation and necessary adjustment of ecological policy of the company;
- organizes activity on observance by employees of the company of the state nature protection legislation, regulatory legal acts of local self-government, instructions of the state supervision authorities;
- determines the responsibilities of the heads of structural units of the technical service company (or a specially authorized employee) responsible for environmental safety;
- approves the internal documents governing the environmental activities of the technical service company.

The person directly authorized in the field of environmental protection, in turn:

- organizes and ensures the implementation of environmental policy and the most important environmental goals;
- organizes compliance of production, products and services with the requirements of relevant standards, rules and norms of environmental protection and rational use of natural resources;
- organizes and ensures the planning of environmental activities aimed at achieving the approved environmental goals of the relevant targets and targets for all major environmental aspects of production, products and services;
- manages the development, reviews, approves and adjusts environmental plans and programs;
- organizes the development and implementation of advanced systems and forms of organization of work on environmental protection;
- controls the provision of the main specialists of compliance of production technology, equipment, buildings and structures with the requirements of standards, rules and norms of environmental protection;
- monitors the implementation of employees of the company rules, orders of the head;
- manages the development, organizes the consideration and approval in the prescribed manner of organizational and technical measures to improve the environmental situation, organizes control over their implementation;
- periodically checks the organization of work on environmental protection in the structural units of the company;
- conducts testing of knowledge in the field of environmental protection;
- ensures the formation of environmental training plans for employees;
- organizes the development and implementation of forms and systems of incentives (incentives) for better work in the field of environmental protection;
- organizes and provides a regular process of environmental monitoring and environmental audit;
- organizes and provides interaction between different levels of government, as well as relations with external stakeholders on environmental issues;
- carries out the general management of development and implementation of the normative-methodical documents regulating nature protection activity of the company of technical service (*Shvydanenko, 2017:70*).

The specific responsibilities of employees of the technical service company in the field of environmental protection are reflected in their job descriptions, taking into account the structure and specifics of production and economic activities of the company.

Environmental policy and its derivatives – internal normative-methodical, organizational documents of the technical service companies in the field of environmental protection – are developed on the basis of international, state legislative and normative acts, taking into

account the requirements established by local governments. structural subdivisions carry out their activities.

Internal documents, which are developed and adopted at the technical service company on the basis of environmental policy, should be aimed at:

- prevention of impact on the environment and on the consistent improvement of all environmental aspects of its activities, as well as to provide an opportunity to assess the impact on the environment and its condition;
- development, adoption and adjustment of environmental policy, goals and objectives;
- planning, organization and practical implementation of environmental protection activities;
- current monitoring and control of activity;
- audit of the environmental management system, analysis of the achieved results and improvement of the existing environmental management system (*Holub, 2014: 10*).

Implementation of the environmental policy of the technical service company requires compliance with the following requirements:

- introduction of the provision on constant improvement in the field of management of ecological activity and ecological policy of the company;
- documentation, implementation and communication to staff;
- compliance of the profile and scale of the company and the nature of the impact of its activities, products and services on the environment;
- establishing a framework for defining and reviewing environmental goals and objectives;
- access for the public;
- introduction of obligations to comply with laws, regulations and other requirements for which the company is responsible.

From the position of Yu.V. Babina environmental policy of the technical service company affects (*Babina, 2017:35*):

- responsibility (and its distribution) for environmental protection, based on the organizational structure of each technical service company;
- system of ecological training of the personnel of the technical service company, which will determine the categories of specialists and personnel whose activity affects the environment, categories of determining the need for training, the procedure for making decisions on referral to training, the procedure for checking the effectiveness of training (certification);
- system of stimulation of the personnel of the company of technical service concerning increase of professional skill and efficiency of nature protection activity;
- operational communication between different levels of the environmental management system;
- a system for handling documents that regulate or register all aspects of this activity. The system of document circulation in the field of environmental protection operates in accordance with internal regulations, as well as documents governing reporting to regulatory organizations;
- identification and control of operations affecting the environment. The order of operations management determines: procedures for identification of operations, identification of the most significant operations, determination of quantitative criteria of personnel work on operations in order to comply with the established planned environmental indicators, functional responsibility for compliance with the established requirements;
- system of prevention of emergencies and emergencies at technical service companies, including: procedures and methods for determining risks, emergencies, documentation of all

emerging emergencies and emergencies, the procedure for personnel in case of emergencies and emergencies, action plan to prevent accidents and emergencies, etc.

The management of the technical service company before the beginning of implementation of ecological policy should understand that it is not something steady and invariable. Also, the actual process of practical implementation of environmental policy requires its improvement based on the achievement of the results of the company, taking into account the changing situation and the opportunities that open up.

4. Conclusions

The development of an effective environmental policy is one of the first and most responsible steps in creating an environmental management system at the company of technical service. It plays an important role in determining the priorities of the company and should have specific environmental goals and objectives. In fact, environmental policy determines the degree of environmental responsibility and the extent of the obligations of the technical service company to the environment, according to which all its subsequent actions will be evaluated.

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DESCRIPTION OF DATA CONSOLIDATION PROCESS OF THE CONDITION MONITORING OF ROAD NETWORK IN THE INFORMATION ANALYSIS SYSTEM

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Summary

Information management and decision making in government geographically separated organizational systems are related to the collecting, storing and processing various information from various sources, data validating, actualizing and ensuring reliability, visualizing information and developing user-friendly interface for decision-makers. A significant volume and variety of data in reporting documentation create a crucial complexity of information analytical processing. The article discusses the structure of information flows that enter the information analytical system for monitoring the state of the road network and should be consolidated for future use. Creation and implementation of this information analytical system allow to maintain coordination and coherence of decisions based on data collected from various information sources and to control their implementation. This determines the relevance of the problem of ensuring the consolidation of physical, economic and social information about the state of the road infrastructure during the information analytical system monitoring of the state of the road network. The consolidated data is the initial information for the calculated mathematical models and is used to make decisions on the use of available resources and budget, assessing the condition of the road surface, optimizing the route of trucks.

Keywords: information management, state control of the road industry, data reliability, optimization of transport route, information processing, consistency of decisions.

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1. Introduction

Providing the completeness and integrity of information, that is used for condition monitoring of Ukraine road network, and which later becomes the basis for making managerial decisions at different organizational levels, is one of the major and important components of information management for government control of the roadway industry.

Information management and decision making in government geographically separated organizational systems are related to the collection, storage and reduction of diverse information from various sources, verification of data for validity, actualization and reliability, visualization of information and development of the convenient interface for decision makers. Active realization of control problems during the reduction process of big data is impossible without the implementation of modern information analysis systems (IAS) and decision support systems.

Among the tasks of information management for geographically distributed organizational systems are selected such management tasks, associated with the processing of mass data, as:

- information consolidation from different organizations (organizations related by the information flows, the organization low-level structures);
- data reliability (validity, accuracy, uniqueness);
- monitoring organization, gathering of relevant information;
- information security at each level of the geographically distributed system;
- technical and technological support of servers for storage and work with mass data.

When constructing the IAS for roadway control industry one of the most important problems is consolidating of data with various structures, data received of the existing systems and sources: regional units reporting, documents from governmental policy realization, internal plans and orders, information from other governmental and private organizations etc.

2. Literature Analysis

In modern business society the consolidated information within the management decision making is given a significant role. The methodology of information consolidation appears from the economic nature of business processes and from the reporting role as an information base for decision making and economic analysis (*Isaev, 2006*).

Many scientific works, of both native and foreign specialists, are devoted to the research of the problems of development and implementation of IAS into government work and their influence on regional development (*Puhach, 2010; Order of the Cabinet of Ministers of Ukraine № 92-r of 11.02.2016; Yelchaninov, 2011; Sevastianova, 2009; Biriukov, 2012; Hritsenko, 2010; Buede, 2011; Zaslavskiy, 2010; Zaslavskiy, 2012; Makhno, 2012; Yudin, 2010*).

For example, in the work (*Puhach, 2010*) the author draws attention to the chaos and absence of development strategy of information and analytical support of government managerial organizations, while the Concept of creating the integrated information analysis system “Transparent Budget” (*Order of the Cabinet of Ministers of Ukraine № 92-r of 11.02.2016*) refers to creating the IAS as a tool for modeling, predicting situations in the financial management sphere, process automation of reports making, facilitation for management decision making and checking for their effectiveness, analysis of regional development.

A significant amount and variety of data in reporting documentation create a crucial complexity of the information analytical processing. In the work (*Biriukov, 2012*) the authors proposed the software of the automated data processing and visualization of the roads condition. In the work (*Gritsenko, 2010*) is considered a decomposition designing scheme of IAS, which allows reducing the time of solving the designing tasks and provides support of the system structure in optimum form. It can also improve the quality of decisions made on the basis of database of this system.

The work (*Buede, 2011*) describes standard IDEF0, which is a federal information processing standard (FIPS), and was created by the U.S. government National Institute of Standards and Technologies (NIST).

Furthermore, in road industry for the IAS can be used data, which are geo-spatial information. The geo-spatial data representation is usable for the road network condition monitoring (*Makhno, 2012*), condition imaging of the objects construction and roadways repairing work (*Yudin, 2010*).

3. The Object of an Article

The object of an article is presentation of the theoretical and methodological researches, practical bases of the data consolidating formation about physical characteristics of objects, economic and social information (condition of the facilities of road industry, their construction, reconstruction and repair, scopes and terms of funding, priority of governmental policy) and its implementation to the IAS of the condition monitoring of road network.

4. Description of the Structure and Sources of Consolidated Data

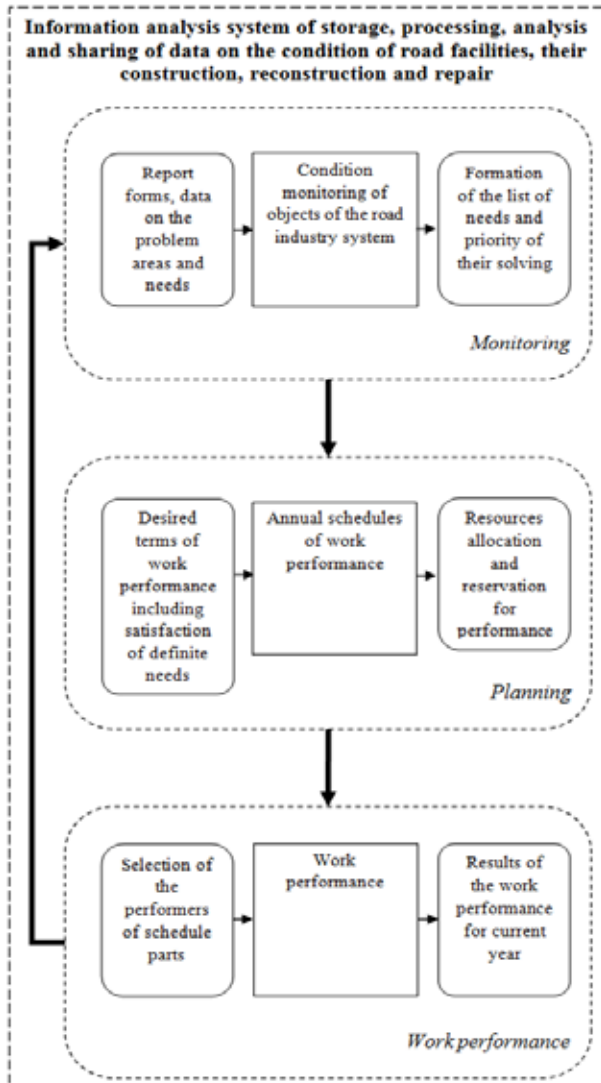


Fig. 1. The life cycle of work performances on the construction, reconstruction and repair of the road facilities

Creation and implementation of IAS allow to maintain coordination and coherence of decisions, based on data collected from various information sources, and to control their implementation. Consolidated data are used for the ensuring of management activities automation in government and allow improving the efficiency and quality of management decisions and business processes.

During the monitoring and analysis of road conditions, there occur a number of mathematical models that corresponds with the road management tasks. Such tasks may occur at every step of the life cycle of information, scientific and technical support of the monitoring and control processes of the road facilities condition (Fig. 1).

At the stage of monitoring in IAS are collected and analyzed different forms of reporting for all road facilities and is generated a comprehensive status report of the road industry. According to the results of detailed data analysis and comprehensive report, is compiled a list of tasks and works on construction, reconstruction and repair, a list of resources necessary for their realization, works timescales and their priority.

The data formed at the stage of monitoring are entrance data for the formation of schedule plan of works. According to the results of planning stage, is created a resources support

plan for implementation of the works of construction, reconstruction and repair of road facilities, including the expected financial yield.

The stage of work performance involves full information support in schedule plan implementation upon each item – from the selection of performers, ending the presentation and analysis of the conducted works results – for basing them, for further use and comprehensive analysis at the stage of monitoring.

At every stage of the life cycle the data can come from various sources (regional service, government, operational analytical data, etc.) and have different structure and priority (Table 1).

Table 1

Information Flows for Analytical Processing at Different Stages of the Life Cycle

Stage of the Life Cycle	Sources of Information Flows	Forms of Data Submission
Monitoring	Regional road services, Ukraine Government roadway agency departments, government, scientific research institutes	Annual reports from regional services and Ukraine Government roadway agency departments about the condition of road facilities, their construction, reconstruction and repair, governmental development programs, scientific analytical materials, scientific research results on researching of road surface quality
Planning	Regional road services, Ukraine Government roadway agency departments, government, Ministry of Infrastructure of Ukraine, Cabinet of Ministers of Ukraine	Annual schedule and current work performance plans, Ukraine Government roadway agency management order, directions and orders of the executive departments of government
Work performance	Regional road services	Current reports, analytical reports

At the initial stage, according to the annual schedule, in the end of a year, is conducted the analysis and monitoring of the condition of road network facilities, which is accompanied by the reports receiving from all the regional services and operational information about implementation of the annual plan. According to the results of this information gathering, processing and consolidating, is created and filled the database for such indicators of the objects condition as:

- quantity of the objects, which need repair, reconstruction and their geographical arrangement;
- complexity of the repair and reconstruction on each object;
- priority of the work performance;
- needs for work performance;
- current condition of the tasks in hand.

At this time are also received data about annual funding plan from the governmental budget, attraction of investors, implementation of scientific and technological developments for further work planning.

After forming the list of objects, needs of work performance with them, objects priority and planned funding, is designed an annual schedule of work performances, which is consistent with regional services and governmental policy strategy in the road industry.

Next is the stage of work performance, which is accompanied by variable reports, references, quality analysis work etc. Then, at the end of the calendar year, are conducted indicators monitoring and analysis again.

The information contained in IAS can be used for a management decision making on the production scheduling, production capacity developing and objects of production purpose, which have an industry-wide significance for the development strategy and improvement of the public road network, the governmental, purpose-oriented, comprehensive and social road industry development programs, providing with detailed assessment of the objects condition of construction, reconstruction, repair and maintenance work of the roadways. That is why, relying on the mass data and potential participants of the decision making and correcting, their qualitative characteristics should be provided at all stages of the life cycle of informative, scientific and technical support.

Data entered in the IAS, are characterized by the following indicators:

- reliability – data, entered in IAS by the responsible employees, should correspond to the real indicators;
- accuracy – data should be entered according to the format defined for these data by regulatory standards, reporting documentation forms and IAS settings;
- completeness – information should cover all the indicators and give comprehensive data in accordance with regulatory acts, reporting requirements and other reporting documents, where it will be used;
- timeliness – delivery of information within the time limits prescribed by work processes, regulatory documents, IAS settings etc.

5. Conclusions

The consolidated data is the initial information for the calculated mathematical models and is used to make decisions on the use of available resources and budget, assessing the condition of the road surface, optimizing the route of trucks etc.

In organizations included into the structure of the road industry system, there is already a significant quantity of segmental information resources with databases, containing information about condition of road network, materials, used for improving the road surface quality, and methods of their use etc. This results the importance of the problem of providing the consolidation of physical, economic and social information about the condition of the road infrastructure during the IAS monitoring the condition of the road network.

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The bibliography to the article should be edited in the alphabetical order.

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The contents of articles, the credibility of data, facts, quotations, level of self-dependence of obtained results are entirely the responsibility of the authors of the articles

THE EXAMPLE OF THE DESIGN OF MATERIALS**NEW ECONOMIC SYSTEM OF SOCIETY DEVELOPMENT****John Sitdson**

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Summary

The article deals with the information economy as a new economic system wherein information and knowledge are the main products. It is proved that a central component of an economic system is work with information and use of information systems in the process of management. The author substantiates the requirement for the search of new approaches to the solution of problems of development of institutional structures of information economy.

Keywords: knowledge, information, system, information economy, management.

DOI: <http://dx.doi.org/10.23856/xxxxxxxxxxxx>

Introduction

Global growth of information and telecommunication technologies, on the one hand, and also the necessity of development of scientific knowledge in the area of theory, methodology and practice of informative approach of study of information economy and society, on the other hand, determines topicality of consideration of the process of formation of information economy. Information turns into a strategic resource and factor of acceleration of scientific, technical and technological development and becomes a part of the real economy.

Subtitle of the body

It presupposes the conceptual comprehension of the process of establishment of an informative and technological method of production and related to it forming of an information paradigm in a modern economic science.

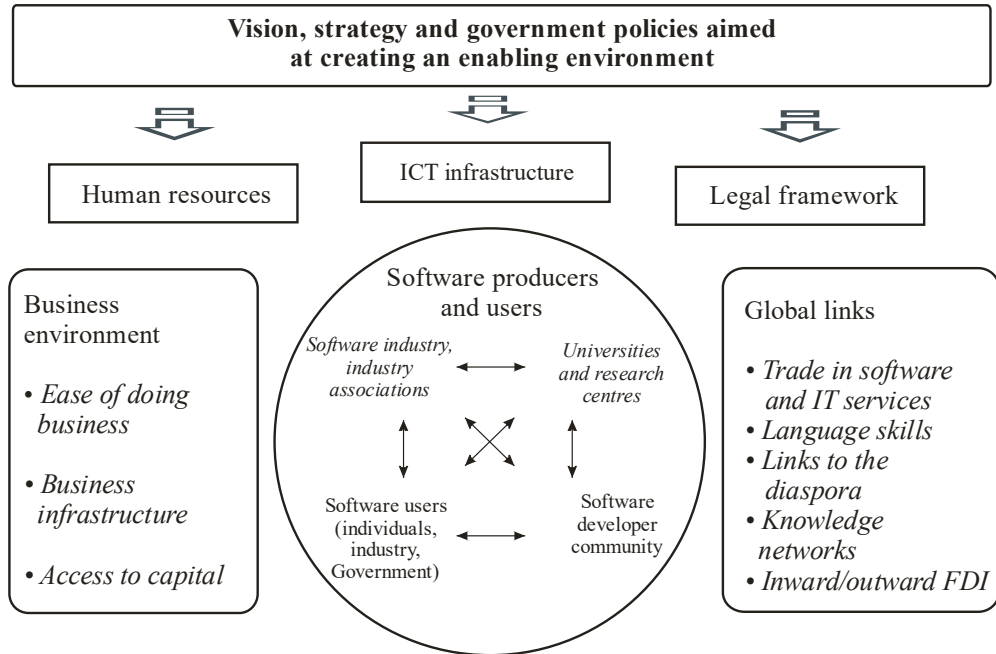
The evolutionary process of the establishment of information society is represented in researches of P. Drucker, who used a notion “information revolutions” (Drucker, 1989). He worked out the theory of the stages of development, which allows deeper understanding of the logic of establishment of information economy.

The term “information economy” was first used in 1976 in works of Mark Porat, an employee of the Stanford Centre and designated by him as a cluster of industries, engaged in the production of modern databases and facilities which provide their application and functioning (Porat, 1978). He is given the credit for introducing a distinction between the primary and secondary information sector of economy. A primary sector, according to his opinion, can be estimated quantitatively, while everything is much more difficult with the secondary one.

The Revolution in the development of information technologies allowed to talk about a global network, which materialized the globalization of economy. New information technologies, in fact, are not simply becoming the instruments of application, but also the

processes of development. The system-oriented analysis of the information economy with due regard to the forming informative paradigm of the economic theory requires additional consideration.

Figure. 1. A national software system (Information Economy Report, 2012)



Conclusions and suggestions

Conception of information economy includes fundamental definition of information society. It's defined as a system of connections and relations between individuals, which appear in the process of interchange of information concerning social and economic activity. Information economy is simultaneously defined as a system of public relations, wherein the information is a basic productive resource.

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