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TABLE OF CONTENTS (BY BRANCH GROUPS)

A SOCIAL SCIENCES

STAFFING OF PUBLIC ADMINISTRATION BODIES IN THE CONTEXT OF THE DEVELOPMENT OF A DIGITAL SOCIETY DMYTRO KHARECHKO, OLEKSANDRA NIEMA, OLEKSANDRA KHUDOBA, DIANA ZAYATS, OLHA OLEFIRENKO, VIRA BUDZYN	6
ARTIFICIAL INTELLIGENCE AS A TOOL OF PUBLIC MANAGEMENT OF SOCIO-ECONOMIC DEVELOPMENT: ECONOMIC SYSTEMS, SMART INFRASTRUCTURE, DIGITAL SYSTEMS OF BUSINESS ANALYTICS AND TRANSFERS MARTA KARPA, TARAS KITSACK, OLHA DOMSHA, OLHA ZHUK, LIUDMYLA AKIMOVA, OLEKSANDR AKIMOV	13
PUBLIC-PRIVATE PARTNERSHIP AS A TOOL FOR IMPLEMENTING STATE POLICY LARYSA GAIEVSKA, VALENTYNA KARLOVA, OLENA BOBROVSKA, MYROSLAVA KULYNYCH, LIUDMYLA AKIMOVA, OLEKSANDR AKIMOV	21
DEVELOPMENT OF CONSTRUCTION PROJECTS AS A COMPOUND AGGREGATED SYSTEM VADYM POKOLENKO, OLENA BONDAR, OLEKSII YASCHENKO, IRINA YAKYMCHUK, NATALIIA LATANIUK	31
SOCIAL POLICY DEVELOPMENT IN THE CONDITIONS OF DIGITAL TRANSFORMATION OF SOCIETY YEVGENIY BORODIN, NATALIIA SOROKINA, TETIANA TARASENKO, NATALIIA VOLKOVA, LIUDMYLA AKIMOVA, OLEKSANDR AKIMOV	40
MAIN ROUTES FOR IMPROVING THE EFFICIENCY OF MARITIME TRANSPORT IN THE FACE OF NEGATIVE EXTERNALITIES OLHA PETRENKO, LARYSA RAICHEVA, ANATOLIY HORBAN, IRYNA TYKHONINA, ALINA NECHYPORUK, RUSLANA SODOMA	47
ACCOUNTING AND ANALYTICAL TOOLS FOR THE FORMATION OF SUBORDINATED DEBT OF COMMERCIAL BANKS IN UKRAINE TETIANA SHMATKOVSKA, IHOR KRUPKA, VASYL SYNENKO, ROMAN SYDORENKO, NATALIIA MOSTOVENKO, TETIANA TALAKH, IRYNA DANCHEVSKA, NATALIIA MELNYK	52
FEATURES OF FINE ARTS OF THE EARLY 21ST CENTURY: PAINTING, DRAWING, SCULPTURE TETIANA PROKOPOVYCH, IVAN TARASIUAK, DMYTRO ZINKO, OLEKSANDRA PANFILOVA, OLEKSANDR BERLACH, ROMAN VILGUSHYNSKYI	56
INDIRECT AND DIRECT PEDAGOGICAL INTERACTION OF TEACHER WITH STUDENTS IN THE CONDITIONS OF ELECTRONIC LEARNING AND THEIR PERFORMANCE OF THE ROLES OF "E-TEACHER" AND "E-STUDENT" TETIANA MIYER, NATALIIA SIRANCHUK, NATALIA VYSHNIVSKA, NINA RUDENKO, OLEKSANDRA SHKURENKO, LYUDMILA ROMANENKO, YULIIA FEDOROVA	62
EDUCATION AS AN OPEN SYSTEM AND EDUCATION AS A PROCESS OF ORGANIZING E-LEARNING IN THE ONLINE SPACE IN THE CONTEXT OF A VARIABLE DEFINITION OF THE PHENOMENON "QUALITY" TETIANA MIYER, SERHII OMECHUK, OLHA BILYAKOVSKA, NINA RUDENKO, LYUDMILA ROMANENKO, ZHANNA FEDIRKO, KATERYNA ROMANENKO	69
PUBLIC-PRIVATE PARTNERSHIP AS A FOUNDATION OF THE FINANCIAL STABILITY OF THE STATE AND HOUSEHOLDS IN THE CONDITIONS OF HEALTH CARE FINANCING TRANSFORMATION IN UKRAINE SVITLANA KACHULA, LIUBOV LYSIAK, LILIIA BARANNYK, IULIIA MASIUK, TETIANA TERESHCHENKO, TETIANA SALNYKOVA	76
CREATIVITY OF ASTOR PIAZZOLLA IN THE CONTEXT OF THE DEVELOPMENT OF FOLKINSTRUMENTAL PERFORMANCE MYRON CHEREPANYN, VIOLETTA DUTCHAK, IRYNA PALIICHUK, MARYNA BULDA, STANISLAV ZHOVNIR, VIKTOR SPODARENKO	84
FORMATION AND TRANSFORMATION OF WOMEN'S IDEAS ABOUT MATERNITY BEFORE AND AFTER CHILDBIRTH: SOCIAL-PSYCHOLOGICAL ANALYSIS OF FACTORS (BASED ON THE DATA OF UKRAINE) NADIYA CHEPELIEVA, OLGA CHORNA, IRYNA NECHITAILO, YEVHEN PIDCHASOV, TETIANA YELCHANINOVA, TARAS ZHVANIYA	91
LEGAL NATURE OF JURISDICTIONAL IMMUNITY OF STATES IN INTERNATIONAL PRIVATE LAW YEVGEN POPKO	98
CULTURE AND ART: MODELS OF SOCIAL COMMUNICATIONS VIKTOR MOZGOVYI, SVITLANA SHULIACH, YURIJ ODOBINSKY, GANNA YERMOLAYEVA, OLENA TRYHUB	104
FROM OUTSIDERHOOD TO SUCCESSFULNESS: DEVELOPMENT ISSUES (TEACHERS' COMMUNITY POINT OF VIEW) ANATOLIY ANTSIBOR, NELINA KHAMSKA, DMYTRO MATIUK, CATHERINE POLYANSKA, LYUDMYLA HUTSOL	110
FORMATION OF SUBJECT COMPETENCE OF FUTURE PEDAGOGUES IN THE PROCESS OF STUDYING THE SYNTAX OF THE UKRAINIAN LANGUAGE LARYSA DERKACH, RUSLANA ZINCHUK, LIUBOV MIROSHNICHENKO, OLENA POKHYLIUK, OLENA HUZAR	114
EXPRESSION OF NEGATION IN MEDIA TEXTS DURING THE RUSSIAN-UKRAINIAN WAR NATALIIA KOSTUSIAK, MARYNA NAVALNA, OLESIA SKLIARENKO, TETIANA MASYTSKA, TETIANA SYDORENKO, OKSANA PRYMACHOK, LARYSA HOLOIUKH	123

LEXICO-SEMANTIC INNOVATIONS IN THE TEXTS OF THE UKRAINIAN MASS MEDIA ON MILITARY TOPICS MARYNA NAVALNA, VASYL SHYNKARUK, NATALIIA KOSTUSIAK, OKSANA PROSIANYK, YULIIA CHERNOBROV, NATALIYA ADAMCHUK	132
CATEGORY OF GENRE STYLE IN THE CONCEPTUAL SYSTEM OF MODERN MUSICOLOGY NATALIA OSTROUKHOVA, YIU ZHU, YUE QUN, FENG ZHOU, WENJING XIANG	140
THE FIELD OF PROFESSIONAL SKILL AS A PREREQUISITE FOR THE GENERAL DISPOSITION OF THE PROFESSIONAL TRAINING OF A MUSICIAN-PERFORMER OLHA OHANEZOVA-HRYHORENKO, LIUDMYLA ZYMA, JIN WANG, TSIUNI VAN, JIAYUAN YIN	145
LANGUAGE VERBALIZATION OF QUANTITATIVENESS IN MODERN MASS MEDIA: LINGUISTIC-COGNITIVE AND COMMUNICATIVE-PRAGMATIC DIMENSIONS IN UKRAINIAN LANGUAGE NATALIIA KOSTUSIAK, NATALIIA SHULSKA, YULIIA LISOVA, KATERYNA YARESKO, IRYNA IVANOVA, OLHA POCHUIEVA, OLENA AFANASIEVA	149
INFORMATION AND PSYCHOLOGICAL OPERATIONS (IPSO) AS A DISCOVERY OF FALSE NARRATIVES IN THE CONDITIONS OF MILITARY CONFLICT IN THE MEDIA NATALIIA SHULSKA, NATALIIA KOSTUSIAK, ANTONINA MITLOSH, IHOR PAVLYUK, MARIIA POLYVACH, ALLA MUDRYK, OLENA SUSHKOVA	156
TOOLKIT FOR THE FORMATION OF NARRATIVE STRATEGIES OF THE RUSSIANUKRAINIAN WAR (USING THE 2022–2023 MEDIA LANGUAGE AS AN EXAMPLE) OLHA KYRYLIUK, NATALIIA SHULSKA, RUSLANA ZINCHUK, INNA DEMESHKO, TETIANA NESTERENKO, HANNA VOLCHANSKA, NATALYA FENKO	163
POLITICAL INSTITUTIONS OF PARLIAMENTARISM IN THE PROCESSES OF CONSTITUTING THE LOCAL CHURCH OF UKRAINE ANDRII KOBETIAK, VADYM SLYUSAR, OLEKSANDR YEVCHENKO, YULIIA KONDRATIUK	172
INNOVATION IN PROFESSIONAL TRAINING OF UNIVERSITY UNDERGRADUATES IN UKRAINE WITHIN THE CONTEXT OF NEW EDUCATIONAL REALITIES NATALIIA VASYLYSHYNA, ANDRII VYSELKO, KATERYNA ZAVIZION, LIUDMYLA KALASHNYKOVA, OLENA HORSKA	177
THE PHENOMENON OF UNIONIQUE MUSIC AS THE RESULT OF GLOBALIZATION PROCESSES OF THE 20TH - 21ST CENTURIES IRYNA PALIY	183
SINGING AND TRUMPET AS CONCERT OPPOSITIONS OF THE BAROQUE AGE ORYSIA BALANKO, MYKOLA BALANKO, VALENTINA ANTONYUK	187
CONSTRUCTION ECONOMICS AS AN INDICATOR OF MACROECONOMIC TRENDS LARISA GUSAROVA, LIUBOV LEPSKA, OKSANA RUBTSOVA	194
REPERTOIRE POLICY AS A BASIS FOR THE DEVELOPMENT OF PERFORMANCE SKILLS OF AN INSTRUMENTALIST MUSICIAN OLENA DROZDOVA, SVITLANA BORYSOVA, ALEXANDER PLOKHOTNYUK, ANATOLII GONCHAROV, GANNA KONDRATENKO	201
PSYCHOLOGICAL ASPECTS OF THE LANDSCAPE OF MODERN ORGANIZATIONAL AND PEDAGOGICAL CONDITIONS OF TRAINING OF SPECIALISTS THROUGH THE INTEGRATION OF EDUCATION, SCIENCE AND PRODUCTION IN UKRAINE YEVHENII MARYNCHENKO, TETIANA SERHA, TETYANA CHUMAK, ANNA MAKOGIN, VASYL SALABAI	207

J INDUSTRY

JUSTIFICATION OF THE LOAD STANDARDS FOR THE IMPLEMENTATION OF TASKS BY THE INSPECTOR COMPOSITION OF EMERGENCY PREVENTION UNITS OLEKSANDR DOTSENKO, VADYM NIZHNYK, OLEKSANDR KRYKUN, VIKTOR MYKHAILOV, SERHII TSYMBALISTIIY, OLEKSANDR TESLENKO, YEVHEN LINCHEVSKYI, YURII LUTSENKO, OLEKSANDR NUIANZIN, RUSLAN KLYMAS	216
USE OF DIGITAL TECHNOLOGY TOOLS FOR FORMING THE READINESS OF FUTURE SPECIALISTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT LABOR MARKET OF UKRAINE INNA MARYNCHENKO, MARIANA MALCHYK, YURII ILIASH, VALENTYNA PAPUSHYNA, MYKOLA YAKYMECHKO	222

A SOCIAL SCIENCES

AA	PHILOSOPHY AND RELIGION
AB	HISTORY
AC	ARCHAEOLOGY, ANTHROPOLOGY, ETHNOLOGY
AD	POLITICAL SCIENCES
AE	MANAGEMENT, ADMINISTRATION AND CLERICAL WORK
AF	DOCUMENTATION, LIBRARIANSHIP, WORK WITH INFORMATION
AG	LEGAL SCIENCES
AH	ECONOMICS
AI	LINGUISTICS
AJ	LITERATURE, MASS MEDIA, AUDIO-VISUAL ACTIVITIES
AK	SPORT AND LEISURE TIME ACTIVITIES
AL	ART, ARCHITECTURE, CULTURAL HERITAGE
AM	PEDAGOGY AND EDUCATION
AN	PSYCHOLOGY
AO	SOCIOLOGY, DEMOGRAPHY
AP	MUNICIPAL, REGIONAL AND TRANSPORTATION PLANNING
AQ	SAFETY AND HEALTH PROTECTION, SAFETY IN OPERATING MACHINERY

STAFFING OF PUBLIC ADMINISTRATION BODIES IN THE CONTEXT OF THE DEVELOPMENT OF A DIGITAL SOCIETY

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Abstract: The article demonstrates the essence of public administration staffing, indicates its role and necessity in modern realities. The priority tasks of personnel policy in the context of the digital transformation of society, and its continuous dynamics, are given. The issues of competence of civil servants of the digital era are considered. The problem of reducing the attractiveness of employment in the bodies of public management in the eyes of a new generation of labor market participants, as well as the challenge of quit rate increase, is analyzed. Within the paradigm of New Public Management, based on the latest trends in human resource management – Agile approach and Talent Marketplaces – the necessity of transforming employee value proposition in the public sector is outlined.

Keywords: public administration; new public management; staffing; HRM; Agile; talent marketplace.

1 Introduction

Obviously, the qualifications of personnel, state and municipal employees' understanding of their tasks, and their attitude to work are decisive factors in the effectiveness of public administration. Many highly qualified specialists work in state and municipal governments, with extensive experience in their fields, but they lack the knowledge that would provide new approaches and methods for solving modern problems, especially in the context of the development of a digital society.

The essence of HR policy, staffing in government bodies is to attract, retain, and rationally use highly qualified personnel in public service positions, create adequate conditions that allow specialists to regularly apply their skills, which will favorably affect the successful performance of their duties and ensure the effective functioning of public authorities [7].

The process of implementing the personnel policy should be aimed at using to the fullest extent the creative potential of employees, their extraordinary abilities, energy, skills to identify and eliminate problems. The application of this approach leads to an increase in the quality of work of civil servants and the effective implementation of the most important state programs in various spheres of society.

Staffing in public administration is understood as the activity of the state in the formation of requirements for civil servants, in their selection, training, retraining and rational use of available labor resources, taking into account the state and prospects for the development of the state apparatus, forecasts of quantitative, qualitative needs for personnel based on the principles of public service [23, 30].

The main areas of personnel policy in public authorities include:

- Formation of a strategy for the development of the civil service, taking into account trends and prospects for the evolution of society and the state;
- The establishment of strict requirements for admission to the civil service in order to provide authorities with reliable and professional specialists who are not only able to cope with their official duties, but also are capable of increasing

the authority of government bodies and the state as a whole;

- Organizing a system of advanced training for employees of public authorities, creating conditions for career and professional growth of employees, popularizing the paradigm of life-long learning;
- Improving the digital competencies of civil servants;
- Introduction of best business practices in the field of digital HRM, recruiting and corporate training - in particular, external and internal talent marketplaces.

Professionalism, moral and ethical attitudes of the individual, beliefs, etc. directly define how a civil servant will relate to the performance of his official duties, to what extent he will not be exposed to corruption risks. However, digital communications are no less important today for employees of public administration bodies. A modern civil servant responsible for the implementation of digital projects and the transfer of work processes to a digital environment should not so much rely on developers, but rather be able to understand in a team with his colleagues what people expect from new services and in general from public administration, and actively engage in changes for convenience and satisfaction of citizens, improving the quality of life. Now state and municipal employees must become part of a new management culture, without which the digital transformation of society can hardly be successful. Moreover, the question of the readiness of civil servants for continuous and rapid changes in the information and communication technology environment raises. Each new information system developed and launched in public administration requires increasingly more new knowledge within the framework of digital transformation, expanding the qualification requirements for an employee of state bodies, creating a certain multi-level advanced system of professional digital competencies of a civil servant [3]. In order for the evolution of public administration in the digital age to be effective and not belated, the civil servant must evolve along with technical innovation, which must be taken into account when developing and implementing staffing strategies and programs.

In accordance with the principles of the New Public Management, the development of market principles within the public sector is stimulated, and management technologies from private business are introduced. As a result of privatization and the delegation of a number of state powers to market structures, there is a reduction in the scale of state administration, the principle of paid public services is introduced, and most importantly, there is a revision of state obligations and the rejection of some of them, primarily related to social security.

The new economy requires the knowledge and experience of state and municipal employees in two areas: technical and managerial. It is necessary to shift efforts in personnel training towards the development of new managerial (leadership, team) thinking, conceptual understanding of the strategy, mission of the organization, and personnel management should be based less on administrative methods and increasingly focus on a conscious personnel policy based on a system of interests of both civil servant and public administration bodies [1, 2]. Therefore, the latest scientific knowledge and effective technologies in the field of human resource management, methods for the formation and management of the workforce, and the development of innovative technologies for working with personnel are needed. There is the need for new approaches to such functions as personnel planning, professional selection and evaluation of an employee, retention, the formation of a personnel reserve and career planning, guidance and training of personnel in the course of work, ethics and etiquette of business relations, and the formation of a healthy moral and psychological climate in the team.

The solution of these problems will improve the efficiency of staffing public administration bodies, the state and municipal

service, replenish government bodies and organizations with highly qualified specialists who are able to work effectively in a democratic, information society, as well as will allow forming a modern system of personnel management of the state and municipal service, corresponding to the conditions of the digital society [5, 6].

Thus, the relevance of the study of issues of staffing of public administration bodies today is due to the changing requirements for the professionalism and competence of civil servants, the introduction of new personnel technologies, professional standards, the need to develop new forms of motivation for civil servants in the context of digital transformation of both society and public administration itself.

2 Materials and Methods

The study is based on the fundamental provisions of general sociology, the sociology of management. The paper also uses the conceptual provisions and conclusions contained in the works of scientists on the problems of bureaucracy, political elites, the theory of power, public service, personnel policy, as well as digital transformation, the functioning of the digital economy and the "digital society".

The provisions of the theories of systemic and structural-functional analysis by T. Veblen, R. Merton, T. Parsons turned out to be useful – namely, concerning the creation and features of the functioning of social institutions and structures; M. Weber' provisions about public service as a rational bureaucracy, as well as ideas about the feasibility of a systematic approach in the study of social processes in various types of organizations were included in the methodological base.

Elements of case study method and provisions of Agile paradigm were applied.

3 Results and Discussion

The relevance of the research topic is due to the innovative processes taking place within the framework of administrative reforms in the system of the civil service, the main purpose of which is to increase the efficiency of public administration [8, 10]. Under these conditions, there is a growing need for personnel with professional knowledge and skills to effectively carry out public administration in a modernized socio-economic, political, legal, and information system. In the process of reforming the training, retraining, advanced training of public administration personnel, significant work has been done, which has a positive effect on increasing the level of public administration bodies employees' professionalism and competence, and their ability to solve official tasks.

At the same time, it must be recognized that, in this area of activity of public administration bodies, there are unrealized reserves for raising personnel activities to a higher quality level. Among the priorities, even in democratic countries with a well-developed system of public administration, one can note increasing the scientific validity of the ongoing personnel policy, creating a new system for working with personnel, professional development of civil service personnel, qualitative renewal of educational institutions and personnel services of public administration bodies, taking into account foreign, best world experience in the field of personnel management [11, 13]. There is a need to form conceptual principles for the regulation of personnel activities, the designing of social technologies for the development of HR activities in the areas of search, selection, education of personnel that correspond to the paradigm of social and state development, and the successful implementation of social transformations.

The mechanism of public administration staffing includes principles, forms, methods, measures, and procedures for recruitment. Of course, this mechanism will function successfully and effectively only if all of the above elements interact synergistically.

The effectiveness of the activities of government bodies is determined primarily by two major factors:

- 1) The quality of civil service personnel, i.e., the level of their professionalism, competence, a set of social and moral qualities and value orientations;
- 2) The so-called management (control) technology, i.e., its organizational structure, applied methods, system of regulations, and other factors.

Increasing the efficiency of the implementation of subject-object factors of management leads to an increase in the efficiency of the entire system of public administration. At the same time, the quality of personnel, that is, staffing, and the technological and structural "landscape" of management are closely interconnected.

Merton conducted his analysis of bureaucracy using structural-functional analysis. He viewed bureaucracy as an ideal example of a formal organization characterized by the following characteristics: a hierarchy of positions with many obligations and privileges; competence and responsibility inherent in these positions (and not in the people occupying these positions); a system of rules that over time acquire dogmatic character; technical efficiency raised to the absolute; impersonality and professionalism [26]. Merton first suggested that the negative phenomena inherent in bureaucracy and noted by other authors (in particular, Weber and Parsons) are not a consequence of the personal qualities of officials, but are characteristic of the entire "political machine": "The official life of an state employee is planned for him taking into account his future career through such organizational means of promotion as seniority, pensions, rising wages, etc. All of these tools were designed to encourage disciplined behavior and compliance with official norms. An official is tacitly expected and really strives to adapt his thoughts, feelings and actions to the prospect of such a career. But these very means, which increase the possibility of conformity, also lead to an overemphasis on strict observance of prescriptions, which breeds timidity, conservatism, and technicalism. The shift in emphasis from ends to means is due to the enormous symbolic significance of rules and norms [19]. Another characteristic feature of the bureaucratic structure leads in general to the same result. All officials working together have a sense of common purpose. They have the same interests, especially since the competition has become relatively low due to the development of a system of promotion based on the principle of seniority. Intra-group aggression is thus minimized, and such an order of things is perceived as positively functional for the bureaucracy. However, the esprit de corps and the informal social organization that usually emerges in such situations often leads officials to defend their group interests rather than their clientele and elected top representatives" [26].

It is difficult to disagree with this opinion, and practice indeed often shows this.

The most characteristic feature of personnel policy in the public service in the United States, as in most developed Western countries, is the "merit system". Since the middle of the 20th century, America has been using a career advancement program for officials, which provides for the consideration of a wide range of candidates for vacant positions, taking into account the professional and business qualities, as well as the merits of the employee [24, 25]. This nationwide system is legislatively enshrined in the US code of laws, which establishes that such merits as, for example, the successful completion of certification, an increase in the level of professional training as part of the passage of training programs developed under the guidance of the Public Service Administration, the implementation of special government assignment, etc. In the public service in Japan, as in corporate management, a system of "lifetime employment" is used. The latter means that, once admitted to the civil service, a person acquires the right to work in the organization for his entire working life until retirement. At the same time, the position and the amount of remuneration of an employee are made dependent on the continuous length of

service [27-29]. Another characteristic feature of the Japanese public administration service is the absence of interdepartmental rotations of employees, with frequent (every 2-3 years) rotations of officials within their department. Promotion in Japan is based solely on the results of competitive examinations held annually and available to everyone. The competition for such exams is very high (25-40 people per seat). Persons who have successfully passed the exam are entered in a special list (personnel reserve), from which the relevant department makes the appointment [31-36]. However, the merit system does not fit the dynamic landscape of public administration today - a recent university graduate may have more of the skills needed to serve the digital society. In addition, the merit system is often fraught with the destruction of the unity of the team for the sake of promoting one's own personality, as well as injustice (since a person close to the boss can be promoted, and not the one who deserves it) [21].

The statistics speaks for itself. "From January 2020—just prior to the pandemic—to January 2022, government lost more than 600,000 workers—more than manufacturing, wholesale trade, and construction combined" [18]. The Texas state auditor reported a 38% turnover rate for Texas state employees under 30. In a 2021 survey of state and local government agencies, 38% said their retirement-eligible employees are accelerating retirement plans—the highest percentage since the survey began in 2009 [18]. Government has long struggled to hire and retain talented young workers, as the "silver tsunami" of preretirement employees reaches retirement age. As the values of the younger cohorts shift, this challenge could grow worse unless government updates its approach to hiring and retention. The need for update is clearly evident from the Figure 1 below.

What the private sector offers workers vs. what the public sector offers

Value	Private sector	Public sector
 Flexibility	Very high	Varies, improving with telework
 Work that works for me	• High pay, high risk • Portable 401(k)/pension	• Low pay, high stability and predictability • Defined benefits but requires decades
 Entrepreneurial spirit	• Medium-high • Opportunity for rapid growth	• Often low • Slow, predictable growth
 Well-being	Medium and improving	Medium low and improving
 Purpose and impact	Varies but increasing rapidly	Varies but often high

Figure 1. Comparison of public and private sector offer for employees [11]

The oldest members of Gen Z are now 25, and the youngest are just 10 years old. This cohort will be the target hires for the next decade or more, and their interests are very different from those of baby boomers and Generation X, who now occupy most senior roles in government. Government has to struggle to attract young workers. "This is a growing problem for government whose workforce already skews older and is looking to increase its share of young, tech-savvy, skilled professionals" [18]. It is losing the very workers and skills it needs most. Deloitte experts say that "Workers are now seeking jobs that work for them". This often implies not only better compensation, but rather better work-life balance, and environment enabling a sense of belonging. New employees have little tolerance for a toxic work culture - unethical behavior, lack of respect for workers, or inadequate DEI efforts. Latest studies demonstrate that a toxic culture is 10.4 times more likely to contribute to attrition than inadequate compensation [17]. At the same time, "Workers increasingly want a job that makes a difference. When asked about the most important or very important things personally when choosing a job, 54% of respondents said making a meaningful contribution to society, while 53% wanted a job that focuses on helping others" [46]. Although this statistics is based on the U.S. data, it is also representative for EU countries, and especially for Eastern Europe.

In this context, it is advisable to mention again New Public Management and, accordingly, the application of the best and advanced corporate governance practices, developed in the business sector, in public administration. One of such practices is the Agile paradigm. However, the maturity of the application of flexible management technologies in the public sector is often at a low level today and is not systemic [61]. In this regard, of particular interest is the study of the experience of countries in which Agile has become a widespread approach in public authorities.

Flexible project management approaches (that is, based on Agile paradigm) have been actively used in the UK public authorities since 2011 after the adoption by the Government Digitalization Service of a resolution obliging the authorities to use Agile when developing or purchasing ICT products [4]. The main prerequisite for such an innovation was the need to reduce risks and costs when implementing projects in the face of changing requirements of the country's leadership and the external environment [12]. The speed of change in the modern world has increased to such extent that an effective digital transformation of public administration is not possible without modernizing the management system and restructuring organizational systems.

The introduction of Agile in the UK took place gradually; the first stage in terms of organizational changes was the implementation of activities aimed at creating a new flexible project culture of civil servants and participants in digitalization projects, as well as increasing their level of professional knowledge, skills, and competencies necessary to work within Agile methodology [62, 65]. The development of project teams is a continuous process that is still ongoing, in particular due to bureaucratic barriers that have not yet been fully overcome, but it was managed to reduce their impact on project activities as part of digital transformation.

To organize work, in the UK, the Digital Public Services Standard (Service Standard) has been introduced, the seventh paragraph of which obliges participants in digitalization projects to use Agile and iterative client-centric methods of work. Activities under this paragraph are carried out in accordance with the approved principles of state flexible development. The introduction of Agile into government bodies is implemented using a specially created Agile delivery community structure, which faces the following tasks [16]:

- Dissemination of information on the methodology for applying flexible management approaches in the work of government bodies;
- Creation of a platform where Agile cases are covered and experience is exchanged;
- Formation of a discussion platform for discussing and improving the practice of applying flexible approaches in the implementation of government projects.

One of the important steps of the UK Government on the way to effective GovAgile is the creation of the Digital Services Manual ("Service manual") [40], which covers various elements of service development: from design, technology, and team to user support when using services, improving software products. According to the Manual, Agile is the main approach to project management.

An example of a successful application of a flexible approach in the UK Government is the government portal gov.uk, on the basis of which public services are provided. Within the framework of the Agile methodology, the main tool for project implementation is Scrum. Over the 3 years of the project to develop and improve the portal, by 2015, gov.uk replaced the sites of 1882 government organizations. Today, it is an integral part of the national digital infrastructure, and development is carried out by working out feedback from both users and organizations providing public services [40]. Changes are also being made using Agile.

In the United States, already by 2017, 80% of government projects in the field of information technology were implemented using iterative and flexible methodologies [54]. Today, this figure is significantly higher. An important influence on the development of Agile in the US public sector is provided by the U.S. Digital Service, which is an expert platform for studying the practice of providing digital services, new approaches and ways to implement them in the activities of governments and government organizations [37-39]. The mission of the Service includes the transition from traditional management to the use of flexible iterative methods for the provision of digital services and the implementation of IT projects. It is important to note that this transition is accompanied by the creation of a methodological base, one of the elements of which is the Digital Services Playbook. The document contains 13 key principles for the implementation of projects, supplemented by checklists and questionnaires, the use of which can increase the efficiency of a government agency or organization [54, 63]. One of the principles of the methodology is the use of Agile and iterative tools in the development of digital services in order to create a product that meets the needs of the state and society. The checklist under this principle includes the creation of a prototype, its refinement, special forms of team work, quality management, and other features typical of Agile. U.S. Digital Service pays special attention to the introduction of flexible approaches in procurement activities. In this regard, a platform for the exchange of experience TechFARHub has been formed, practical recommendations of the TechFar Technical Handbook have been developed, and the DITAP educational program is being implemented [41, 42]. An integrated approach to improving the development and provision of digital public management services through the introduction of flexible and iterative project management methods allows for systemic changes and the most effective implementation of the tasks set.

Agile approach implies organizing flexible teams and rotating team roles, thus overcoming the limitations of bureaucracy described by Veblen, Merton, Parsons, and Weber. However, its implementation requires appropriate staffing and a culture of learning and knowledge sharing [44, 45]. Agile helps to save resources when making management decisions and to predict the performance of activities. At the same time, a large number of regulatory requirements can complicate the application of cross-functional team interaction.

Agile methods provide opportunities that go beyond traditional approaches, that is, their application allows for quick, inexpensive, and at the same time successful achieving of results in complex projects with vaguely defined requirements. Agile methods require unconventional measures. This is a unique paradigm that is not easily understood by traditional means [16]. Agile consists in the transformation and change of the paradigm of thinking from command-directive towards professional-autonomous (Agile-minding) [43]. The most popular and most structured of the Agile family of technologies is the Scrum framework, which is the basis for implementing Agile thinking that helps teams move and learn faster, that increases the speed, quality, and innovation of work. Scrum is often used in conjunction with other Agile frameworks.

The use of Agile methods allows speeding up the time of the project fulfillment, ensuring more consistent work of the levels of the organizational structure, increasing team motivation, reducing the cost of services and improving the order of work with clients.

According to McKinsey, specific Agile principles that can be applied at different levels of government, are as follows (see Figure 2).



Figure 2. Specific Agile principles that can be applied at different levels of government [18]

Moreover, one should note that “there is a growing trend in businesses toward the marketplace model for talent from the directed model of management” [14]. Already today, many companies are not limited to the search for only external candidates. Having determined the skills, experience and qualifications, the search for a suitable candidate is also carried out within the company, which allows filling the vacancy faster. Today, recruiting skills are highly valued in business, because it is important to approach the issue of finding a new employee from a strategic point of view. To optimize the recruitment process, companies are trying to automate tactical selection and planning activities [47-50]. The need for an internal talent marketplace is becoming clear as it becomes more difficult to find external candidates. Increasingly, companies are trying to implement internal platforms that allow managers to find an employee to work on a project, and enable employee finding a mentor or a new project. Thus, new opportunities open up for people within the company: ambitious employees rise up the career ladder, and projects are staffed by the best employees [9, 64]. According to Bersin, talent marketplaces will almost consistently outperform the directed model of management because talent marketplaces can adapt and act more quickly. Most governments have occupational classifications that describe the employees’ knowledge, skills and abilities. But marketplaces go beyond. “In President Obama’s second term, the Office of Personnel Management created a talent marketplace where federal employees could contribute their talents and skills to government-wide projects. Modeled after Google’s 20 Percent Time Program, Open Opportunities lists part-time opportunities and short-term details. Open Opportunities allow federal agencies to quickly find talent to fulfill the short-term needs of the agencies when the regular federal hiring process would take too long and be too burdensome” [14].

Technically, this may look like a digital platform where employees post their resumes with a complete list of competencies. And then the project manager or artificial intelligence selects a team for the tasks. Such a talent ‘fair’ enhances the role of corporate training and the creation of individual development trajectories [17, 20].

The platform GovCloud is called “the future of government work” [22]. It uses the model of cloud computing to create a pool of government workers who would be dispatched to, “Small, mission-focused agencies,” as needed to help in carrying out the agencies’ missions. The impetus for switching to GovCloud is that government work is becoming more creative, collaborative and complex. However, government work is structured for the clerical work of the 1950s. As a result, agencies are slow to adapt to changing requirements and needs of citizens.

GovCloud helps federal agencies become quicker to adapt to changing circumstances. Deloitte defines GovCloud as a “New model for government based on team collaboration, whereby workforce resources can be surged to provide services to government agencies on-demand” [15].

Thus, the obsolescence and lack of demand for many forms of daily operational activities, the optimization of routine processes due to the digitalization of procedures, services, and the

emergence of new value motives in the activities of a civil servant lead to the need to find new methods and means of optimal organization of labor in the emerging digital environment [51-53]. Conceptual changes in professional activity are an inevitable and time-consuming process that is recognized and re-evaluated by constantly searching for a compromise between the interests and priorities of the state, the state administration on the one hand, and public administration employees - on the other.

The introduction of new regulations, rules of interaction in the digital environment, optimization and automation of the activities of public civil servants should be accompanied by the formation of motivation to accept and implement them [55-58]. The mutual influence of these processes in the context of digital transformation stimulates a change in the culture of the public administration system. As a result, employees must share new values and attitudes in order to adequately perceive the manifestations of digital culture and interpret them in their own way, and eventually become its bearers. Namely the values that are understood and accepted by each participant in the digital transformation can smooth out resistance in a difficult period of organizational changes in the public administration system.

In the competency model, digital culture is a key block that characterizes the changes which have occurred as a result of the development of personal and professional competencies of digital transformation participants, and staffing must fully comply with these new realities, both to overcome the trend of declining public service attractiveness for younger generations, and to ensure sufficient efficiency of public services in the digital society [59-60]. Many younger employees value flexibility, purpose, well-being, and without meeting these needs, public administration bodies would soon face with labor shortage and further increase of quit rate. Thus, the government 'employee value proposition' is crucially needed to be reconsidered.

In 2015, Transport for London (TFL), the UK capital's largest transport agency, replaced the traditional cascading approach with Agile project management in order to upgrade its digital systems, and received positive results after the two-way sprint based on the Scrum method. Changing the organizational culture to encourage Sprint (Agile) way of working should begin with focusing attention on consumers - citizens who will use the projects being developed [4]. By listening to citizens' needs and working closely together to gather feedback, not only will transparency be increased, but more successful programs will be implemented. Using Agile as a framework for project management will help governments become more innovative by putting citizens' priorities first.

An Agile mindset is an attitude, as well as an innovative approach to problem solving, that can drive public administration reforms in the age of digitalization. At the same time, a flexible way of thinking is needed both at the public management level itself and at the staff level.

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ARTIFICIAL INTELLIGENCE AS A TOOL OF PUBLIC MANAGEMENT OF SOCIO-ECONOMIC DEVELOPMENT: ECONOMIC SYSTEMS, SMART INFRASTRUCTURE, DIGITAL SYSTEMS OF BUSINESS ANALYTICS AND TRANSFERS

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Abstract: The article considers the modern development of public administration in its connection with the use of digital technologies in order to increase the effectiveness of the activities of government bodies, their focus on the needs of the population, expand the possibility of implementing the social functions of the state, openness of decision-making processes and civil control of management activities. It is shown that on the basis of digitalization and, in particular, application of artificial intelligence solutions, the content of public administration, individual procedures and stages of the management cycle, as well as state functions are changing. The best practices of using artificial intelligence in digital public administration systems of various countries are considered, the possibilities of using smart solutions in systems of sustainable development of territories, in analytics and intergovernmental transfers within the framework of regional development are described.

Keywords: public management; artificial intelligence; digital transformation; smart city; digital management.

1 Introduction

The paradigms of the new information world dictate their requirements for the mechanism of state administration. On the basis of digitalization, the content of public administration, individual procedures and stages of the management cycle, and state functions are changing.

The digital transformations made during the creation of e-government become the basis for the digitization of public services at all stages - from requesting services to their execution. The UK Government's Digital Efficiency Report shows that digital transactions are 20 times cheaper than telephone transactions, 30 times cheaper than postal transactions, and 50 times cheaper than face-to-face transactions. These savings are seen as an opportunity to improve efficiency and reduce the cost of public services in the UK. In turn, this can eliminate the need to fulfill the task of reducing budget expenditures by reducing or limiting the availability of these services for the population [13, 23].

Unlike the initial stage of digitalization, the implementation of Industry 4.0 technologies involves the passage of four stages that provide observation (visibility), understanding, preparedness and self-optimization of processes. While in many European countries, for example in Germany, digital transformation is considered primarily in relation to industry, in Japan the impact of digitalization on society as a whole comes to the fore with the use of the Society 5.0 program, for the construction of which, according to Japanese society, it is necessary to overcome several main barriers ("walls") [40].

Regardless of the way typical areas in which governments are involved are organized, such as public health, transportation, public infrastructure, police and defense, citizen services, or their regulation, their functioning can be addressed with digital solutions. For example, some services can be provided by default, that is, without the application of citizens and finding out who is entitled to what benefits and when [6, 24].

While in terms of civic experience the role of digital transformation is becoming apparent in areas such as e-government and digital identity programs, in many other areas transparency, efficiency, and coordination are key to the digitization of processes and project management.

Thus, the first driver of digital transformation in government and the public sector is cost savings and greater transparency. The second digital driver is meeting the needs of a "digital" citizen and improving the quality of service for citizens. The demands of the population are increasing every day, and the priority task of the government is to improve the provision of quality public services that meet the needs of citizens. Thus, governments around the world are under double pressure.

In this landscape, there is increasing efficiency and transparency, improving and harmonizing processes, smart government and smart cities, attracting new investors, bridging the digital divide. Moreover, transformation of public transactional services, data-driven governance, better access to and management of information, increasing citizen satisfaction and trust, the needs of rapidly changing demographics, and balancing costs while optimizing efficiency are all playing a role in the ongoing digitization and digital transformation of government and the public sector - all this should be taken into consideration.

"Digital by default" means "digital in essence", with no alternative when there is no "paper" counterpart. Today, the main requirement in building digital government is to explore the possibilities of full moving from paper documents to records in authoritative databases. In this regard, the problem of data confidentiality and the reliability of the information being processed is of particular relevance. In its solution, it is very expedient to use the technology of distributed data storage - blockchain, the implementation of which will solve two key problems: saving the history of changes and guaranteeing the authenticity of the entered data, as well as the identity of the data for all participants in the decentralized platform.

The creation of a national blockchain system will allow creating a full-fledged platform for digital government, consisting of trusted basic information resources, personal identifiers of citizens and government bodies. The basis of this initiative can be already successfully proven existing basic components of the e-government infrastructure, such as a single portal of public services and municipal services, a federal register of public services, a unified identification and authentication system, a system of interdepartmental electronic interaction, a unified system of regulatory and reference information and state information system on state and municipal payments [2-5]. The main goal of implementing public administration digitalization projects is to streamline and integrate work and production processes, effectively manage data and information, improve the efficiency of online public service delivery, and expand communication channels to engage and empower people.

In a rapidly changing digital environment, the state has to build a complex system of communications and feedback loops with citizens. However, the digital worlds of government and citizens remain relatively isolated from each other: the state may lag behind current trends in the development of digital technologies, and society may underestimate the problems of protecting digital sovereignty.

In the era of cloud computing, big data and social media, a digital governance model (DGM) is emerging, in which digital technologies occupy a central position in public administration and bring organizational cultures that have been formed outside the government sphere under the influence of Internet information technologies. Combining the principles of anarchism and cyber-utopianism from the early years of the

Internet, as well as the principles that underlie the movements to protect open data and digital rights of citizens, the digital governance model serves as a basis for developing practical recommendations in the field of public administration, as well as public decision-making in an increasingly large and complex world of digital technologies [40].

The study of the problems of digitalization of public administration, the introduction of digital technologies in the administrative practice of the bureaucracy is presented in a significant number of scientists' works. However, an analysis of the literature on this topic showed that, despite a lot of scientific research, there are practically no works devoted to the formation of a digital management model in the context of the spread of open and big data technologies in public administration sector. Meanwhile, in recent years, researchers and practitioners have been investing in the technological capabilities of artificial intelligence to process large amounts of government data. At the same time, artificial intelligence is usually defined as an interdisciplinary field of research that opens up many new opportunities.

The value potential of artificial intelligence (AI) is also becoming increasingly important in the context of public administration [64, p. 17]. Thus, China and the United States have recognized the value of artificial intelligence. The Chinese government has demonstrated exceptional determination to catch up with the Western world in the development of AI in the nearest three years [28, p. 68]. The Council of the People's Republic of China issued a guide to the development of artificial intelligence, which set the goal of becoming a global innovator in this field with a total investment of 1 trillion yuan (147.8 billion dollars) by 2030 [16].

At the same time, despite efforts made and increased investment in artificial intelligence research, there is still not much discussion of its use in the public sector. Thus, compared to business areas, the use of artificial intelligence in public administration is still in its infancy.

The potential benefits of artificial intelligence technologies are enormous, but the risks arising from their use are no less great. Meanwhile, in connection with the development of AI, the possibility of its implementation in public administration is becoming increasingly more real - in particular, in economic systems, smart infrastructure, analytics systems, etc. Under these conditions, an in-depth, systematic and even interdisciplinary study of the state of the art, prospects, and implications of AI application in public management acquires crucial relevance.

2 Materials and Methods

The study used general scientific and special methods of cognition, the concept of the formation of a digital economy, information and resource support for state and municipal government, electronic digital support for the processes of public-private interaction, theoretical and applied developments of scientists in the field of theory and methodology of country socio-economic development, digital economics, public administration, the use of human capital and ICT, which made it possible to form key provisions adequate to the goals and objectives of the study based on a systematic approach, methods of analysis and synthesis, generalization, formalization, functional-structural comparison, inductive and deductive methods.

The concept of the study is based on the author's hypothesis that the integrated implementation of tools for digital transformation of public administration using AI based on the formation of the digital mentality of the population and the maturity of the business community will allow achieving high rates of growth and development of socio-economic processes through the implementation of management of interaction with stakeholders of the economy' electronic development and meeting the public needs of the population [7-9].

3 Results and Discussion

The modern digital age in the development of public administration is based on a number of management models that emerged at the turn of the 19th and 20th centuries. As the first of these, the Weberian model can be considered, built around the management of large government structures with a rigid hierarchy and the use of predominantly printed media. This model underlay the "state administration of the progressive era" - the Western managerial model of the late 19th - early 20th century, characterized by the idealization of the civil service, its isolation from the general labor market and the development of sets of general rules that limited and regulated the managerial functions of civil servants [15]. In this model, the role of information technology was minimal (the transmission of text data through the state courier service was supplemented by the use of telegraph and telephone lines), while even the initial modernization of administrative operations, the formation of the first databases, catalogs and file cabinets, mainly led to the strengthening of the bureaucracy' role.

From the 1980s until the early 2000s, the New Public Management (NPM) model as an approach to public administration reform began to dominate in the countries of the Anglo-American organizational culture [43, 47]. Supporters of the NPM placed particular emphasis on the importance of competition, which contributes to the emergence of alternative producers in the market for public services, stimulates the practice of outsourcing in their production, supports not only the formation of strategic thinking among producers, but also the formation of relevant markets, the reduction of the role of state institutions, privatization and pegged financing tied to the end consumer. In many countries, such requirements of the NPM model as the separation of large government departments, increased competition in the public sector and market incentives for civil servants have been implemented in practice. In this model, digital technologies were of auxiliary importance, since their initial application was aimed mainly at improving such indicators of the provision of public services as cost-effectiveness and speed of information transfer.

Since the early 2000s, a new management model has begun to spread around the world, with digital technologies at the center. The transition from the NPM to the digital governance model is not a simple change, but rather a radical turn within the general boundaries of social modernization, which became possible along with the development of the Internet and the qualitative immersion of social processes in the Internet space. It should be noted that the digital management model mainly dealt with such topics as:

- 1) The reintegration of bureaucratic structures with the simultaneous building of horizontal links both within government departments and levels of government, and with their external environment. Such reintegration took place at a new technological level through the creation by the central government of new administrative mechanisms that reduce costs and diminish redundant and duplicative functions of certain administrative institutions, as well as by simplifying the organization of public administration based on the unification and standardization of the work of its constituent elements;
- 2) The organization of public administration in the spirit of holism, focused on the needs of the population and the practice of providing public services, has become an attempt to redesign end-to-end services from the point of view of the consumer, create such integrated tools as one-stop-shop services or electronic queues, modernize or increase the operational flexibility of government structures, which in real time can solve the tasks and respond to emerging deviations from the specified indicators;
- 3) The digitization of public administration, both in terms of full coverage of government departments, and in terms of the widespread introduction of e-delivery of services, where possible - through centralized online public

procurement or new forms of automation focused on zero-touch technologies that do not require intervention of humans. Digitization is also a key stimulus for a radical “unloading” of public administration and the transfer of redundant functions to public and commercial structures [25]. As a result of the development of such a technocratic administration, a transition to more open public administration and regimes of access to public information becomes possible.

The development of digital management at the present stage is a complex and multi-level process, the consideration of which goes beyond the purely technological aspect of the DGM. Digital governance becomes possible thanks to the digitalization of society as a cultural adaptation to key technological advances, the digitalization of the state apparatus and its reintegration at the organizational and financial, as well as budgetary levels, the convergence of the processes of production and consumption of public services in the “state-citizen” chain, where the manufacturer provides constant feedback with a consumer-client.

The overall digitalization process involves the free flow of information from government to the public and third parties such as civil society organizations and the media, as well as from the public and third parties to governments, and is at the heart of well-functioning open governments successfully moving forward on the path of digital transformation.

The analysis highlights the following key principles and main elements of the digital government architecture and the principles of digital government service delivery:

- Numeric by default
- Platform independent and mobile-first
- User-centric service design
- Digital from start to finish
- Government as a platform

Essential elements of Digital Government include the following:

- Single portal
- Single data for sharing in public sector
- Inter-agency shared services
- Government shared infrastructure
- Improved sensor networks and analytics
- Cyber security and privacy

It should be noted that when implementing e-government, technological and communicative components are distinguished. The technological component in management is associated with informatization processes, with an emphasis on the use of ICT in management as an auxiliary tool [19-21]. The communicative component is expressed in the active introduction of ICT in public administration in order to create a transparent information environment, increase the openness of public authorities, enable more effective interaction between the authorities and the population, the formation and strengthening of e-democracy.

The leaders of e-government (Denmark, Great Britain, etc.), overcoming negative factors, are currently already moving from e-government to digital government, which implies the transfer of public services to a digital format from the moment a service is requested to their execution, relying mainly on data, and not on documents [42].

In other words, all management processes are being transformed based on the “digital by default” principle. For example, the Danish government’s “good basic data” strategy considers reuse of data to be fundamental for the effective performance of public authorities’ tasks, as well as a significant contribution to the modernization of the public sector [27]. This is expressed not only in providing high-quality services to citizens and organizations while sharing previously entered data by departments in the process of considering applications, but also frees civil servants from repetitive routine operations and procedures. Since 2004, Denmark has been actively investing in the digitalization of government bodies. Since 2015, the

interaction of citizens and businesses with government agencies has been carried out only via the Internet. Authorities at the level of the country and municipalities are connected in a single network, which allows interacting with all departments, with the use of a single personal account [43]. As noted by the Danes themselves, if one needs to pay taxes, report a bike theft, or make an appointment with the public health service in Denmark, it is possible to do it all from own computer. Every public authority or public official can be accessed online, and every citizen has a certain digital signature for “signing” important documents [16].

Another leader in the implementation of e-government is the UK, which presented in 2017 a new Digital Strategy for the development of seven areas of the “leading digital economy” in the world, where one of the areas is “digital government”. According to the Government Transformation Strategy, the next stage of the digital transformation of the “digital government” (hereinafter, transformation means the “transformation” of public administration and the provision of public services) consists of three components that together form the framework of this strategy [11]:

- 1) Transformation of digital services in the public sector, focused on all users and wherever possible;
- 2) A complete transformation of the department, by digitally transforming the way it delivers its services, which would lead to more flexible management, better service to citizens across all channels, and increased efficiency;
- 3) Internal transformation of the government, which will not necessarily affect public services externally, but is important to increase the level of interagency cooperation, through the transformation of internal management.

In the UK Government Transformation Strategy, there are five main goals for its implementation (achievement):

- 1) Delivering world-class digital services and transforming the way of government’ work, from the front end to the back office, in a modern and efficient way;
- 2) Development of high ICT skills and increase of Internet culture in civil society and business;
- 3) Creation of new digital tools and simplification of procedures in the public sector, increasing the efficiency of civil servants;
- 4) Better use of data not only to ensure transparency, but also to enable the transformation of the public and private sectors;
- 5) Creation, operation, iteration, and implementation of effective common platforms (foundations) of digital government and the use of reusable business opportunities to accelerate transformation, based on common open standards, templates [70].

The digital government in France is based on digital platforms that collect public opinion data and there are even consultations with the public, as well as potential crime zones are identified and predictive justice based on AI is developed [1].

One country that has recently taken more strategic initiatives and actions in the area of digitization and digital transformation is Australia. The country opened a Digital Transformation Office in 2015 to create a unified digital identity that allows citizens to digitally access public services with a single login process, but only 41% of public sector leaders surveyed are satisfied with their organization’s current response on digital trends [26].

In the US, the United States Digital Service is expected to change the way the federal government works with citizens. Obviously, this is a big task for a large country with a rather slow IT transformation, but among the initiatives of the program to improve access to government information, there is Healthcare.gov website and modernization of the immigration system [29-32].

AI is able to assist in the provision of public services to citizens by providing timely and appropriate answers to citizens’

questions. For example, one can develop an application that is an interactive chatbot with which citizens can receive advice and consultations on various issues. A bot endowed with artificial intelligence is able to find in its knowledge base a suitable solution or answer for the situation in which a person finds himself. In case of non-standard situations, it searches for the necessary information, analyzes it and compares it to propose the optimal solution. Also, based on machine learning, the innovation detects and predicts the needs of individuals and populations, and is able to develop a plan for the rational use of resources [34-37]. Artificial intelligence technologies can eliminate criminal conspiracies and expose fraud in public service. As a result, a gradual decrease in corruption in the public administration system is possible. In order to implement this innovation, it is necessary to digitize the entire array of data that is collected and used in public administration, automate this process and increase the degree of data processing using AI technologies. This will lead to an increase in the quality of state bodies' work. Thus, AI in public administration is capable of:

- Solving the problems of civil servants;
- Providing public services to citizens and organizations;
- Reducing the likelihood of successful organization of criminal conspiracies;
- Improving digital security;
- Reducing the level of corruption.

AI-based technologies are gradually becoming an integral part of the infrastructure of "smart" cities, as they help reduce waste, lower energy consumption, improve road traffic and increase safety. Some of the world's largest megacities are already synonymous with the term "smart" cities; among them, there are Barcelona, Seoul, London, and others. Large and small cities of the world are increasingly starting to invest in various smart city technologies in order to create better living conditions for their citizens, while betting on a comfortable, sustainable, and safe urban environment with climate neutral indicators, forming a new paradigm of the ecosystem of cities of the future [38, 39]. The working principle of AI consists in combining a large volume of data with the capabilities of fast, iterative (repeated) processing and intelligent algorithms, which allows programs to automatically learn based on patterns and features contained in various data.

In the economic sector, there is an opportunity to introduce AI in the field of finance. In this area, the use of innovative technology will help improve customer service, calculate the return on investment, and eliminate corruption offences [41]. In addition, AI systems are used to collect and analyze data for the purpose of market research.

In a digitally transformed world, the complex topic (in solutions oriented on people and social impacts), such as Smart Cities is the most infrastructure-rich one. Cities have reached tipping points on many issues: poor governance and weak institutions (the first perceived barrier to prosperity); inadequate infrastructure; growing social inequality; places to live are required; growing crime; growing environmental problems (about 75% of the use of natural resources go into emissions, and cities are the main consumer of natural resources and the main polluter of the planet); new and pervasive risks for cities (violations in cybersecurity, terrorism, securitization, diseases and pandemics, etc.) [1, 22]. Infrastructure plays a key role in solving many of these problems.

Engineering, managing, maintaining, and upgrading infrastructure requires fresh thinking to minimize the use of materials, energy, and labor while maintaining sustainability [44-46]. There is a compelling argument for using sensitivity analysis and data to provide smarter, more proactive management decision-making for the infrastructure. AI-based smart infrastructures can help with this.

The general global trend in the development of AI technologies for smart cities is clearly shown in Figure 1 below.

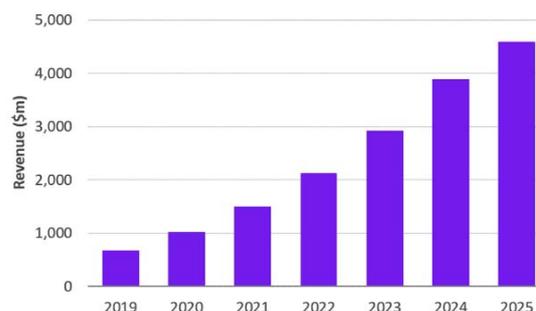


Figure 1. Global smart city AI software revenue

"The arrival of 4G and 5G wireless data technologies are making it easier to collect and manage data, promoting the migration of smart city AI software to the online realm. AI allows data to be analysed more deeply than ever before" [63].

Smart city infrastructure is the organization of the city infrastructure management process using electronic systems. Modern equipment must be adaptable to human presence and meet high energy efficiency standards. Elements of the Internet of Things (IoT) must provide the ability to manage systems online and receive timely information about all malfunctions, failures, etc.

To collect, summarize, and implement infrastructure solutions in the digital economy of the country, for example, in the UK, in fact, the national Cambridge Center for Intellectual Infrastructure and Construction (CSIC) has been created. Funded by Engineering and Physical Sciences Research Council (EPSRC), Innovate UK and industry, CSIC aims to transform the future of infrastructure through smarter information that informs better decision making.

Designing urban change to meet infrastructure maintenance needs requires close collaboration. In particular, BIM and GIS encompass 3D visualization, which greatly helps to understand the impact of events, allowing making key decisions with a greater degree of confidence. They also provide a greater degree of accessibility to information for affected communities to monitor potential impacts and provide information during the planning phase, which gives a much greater chance for successful outcomes [50, 59].

The growing shortage of resources required a gradual transition to controlled flows, but today the next step is needed - the transition to intelligent systems. At this stage, it is necessary to introduce intelligent systems at the manufacturer, the transmission network, and the consumer, as well as at the coordinating center of a separate resource, the general coordinating center of the infrastructure [48, 49]. Recently, the concept of intelligent systems Smart Grid has been actively developing. This concept is considered as a combination of technological, organizational, and economic solutions in building the energy systems of the future. Within the framework of this concept, elements of adaptation, automation, monitoring, and optimization are combined based on modern information, telecommunication, and Internet technologies [18]. These are "smart" meters, local monitoring and regulation systems, intelligent information processing systems, human-machine decision-making systems. In fact, the introduction of this system means the involvement of the city's energy infrastructure in the sixth technological order - information and communication technologies. The action of the Smart Grid covers generating sources, backbone and local networks, consumers, information and control systems [43]. In the USA, Canada, and leading European countries, the Smart Grid concept has turned into national programs for the creation of modern high-tech energy sector, supported by the state. The main goals of these programs are to increase the competitiveness of the national economy, reduce the energy intensity of products and services, reduce

dependence on energy imports, and improve the quality of life of the population.

The main features of the Smart Grid network include the following:

- Providing the level of energy supply;
- Encouraging the consumer to participate in the operation of the network, taking into account the needs and capabilities of the network;
- Organization of equipment operation;
- Ability to prevent accidents;
- Ability to self-repair;
- Selection of optimal options for functioning;
- Automatic selection of solutions in case of failures;
- Adaptation of energy supply regimes to natural conditions.

Governments, industries, and utilities around the world are increasing their financial investment in the promising Smart Grid project. The United States has developed a program for the modernization of energy systems based on the Smart Grid, aimed at providing energy resources in the required volumes anywhere, taking into account access to an environmentally friendly and reliable energy source. Its tasks are: designing of national backbone networks; designing of regional and local networks [69, 70]. In the USA, European countries, China, depending on the organization of the developer, the following terminology is used: Future Grid, Empowered Grid, Wise Grid, Modern Grid, IntelliGrid. One way or another, Smart Grid is an energy infrastructure that integrates energy subsystems, communication networks, databases, and business process management [51-55]. Within the framework of the Smart Grid concept, the variety of requirements of all interested parties (the state, consumers, regulators, energy companies, sales and utility organizations, owners, equipment manufacturers, etc.) is reduced to a group of so-called key requirements (values) of the new electric power industry.

A good example of the application of new technologies is the Smart Grid Gotland project, aimed at developing a strategy for the creation and operation of large-scale smart grids with a large share of intermittent wind energy in the total energy mix, implemented on the island of Gotland in Sweden. This is an important step and one of the key elements in the development of a modern sustainable economy, which can be implemented throughout Sweden and around the world [33]. Over time, this project could serve as an international model for smart grids.

At the moment, a wide system of standards and requirements for functions, elements, devices, and interaction system of the Smart Grid is being formed in the USA and Europe [56-58]. The use of artificial intelligence will reduce losses, improve power quality, reduce the overall cost of power distribution, etc.

China has become a world leader in the development of smart cities that use embedded sensors, measuring devices, cameras and other monitoring technologies with big data processing and artificial intelligence analysis to manage cities and public spaces. In China, there are almost 800 pilot programs (active and planned), which is more than half of the total number of all programs operating in the smart cities of the world [17].

According to the China Smart Cities Index 2020 compiled by the Sydney Business School, which is based on an assessment of the use of artificial intelligence for urban development, the top 10 Chinese "smart" cities are: Beijing, Shanghai, Nanjing, Guangzhou, Shenzhen, Hangzhou, Wuhan, Harbin, Xi'an, Chengdu, and Shenyang. The assessment of cities was carried out according to the following groups of indicators: entrepreneurship - 40% impact (enterprises are both users and innovators in the field of AI, as well as suppliers of AI to the population); AI research - 30% (research and development of Chinese universities, research institutes and high-tech enterprises play a key role in stimulating commercial innovation); AI infrastructure - 20% (key Chinese cities are building up AI infrastructure to create a favorable environment for further innovation in the industry); local government - 10% (local

governments in China use the capabilities of technology firms to create platforms for the purpose of providing services by public bodies).

It is obvious that the further scaling and adequate application of artificial intelligence technologies for the development of smart city ecosystems will require representatives of government, business, science, and the public sector to unite in sustainable collaborations built on the principles of openness, parity, and accountability [60-62].

The development of the digital economy requires a different infrastructure than the infrastructure in the traditional sense, represented by data centers and networks - it is necessary to optimize processes and introduce flexible IT solutions that support the speed of bringing products to market and personalization of offers. Digital platforms should be added to the infrastructure of the digital economy, which can be defined as a software package that allows processing certain types of information, in particular, with the help of artificial intelligence [33]. The platform can be for industrial data, industrial Internet of things, e-government platform, or, the platform can include software for analyzing linguistic information based on artificial intelligence and machine learning technologies, as well as services for creating solutions based on them. Using the analysis of linguistic data, it allows identifying various patterns and trends [65-67]. The need to maintain high-quality statistics, without which it is impossible to conduct an effective economic policy, comes down to the participation of better technologies for collecting and analyzing information, including big data, and in terms of integration with other statistical aggregators that collect a large flow of information.

The main principles of building such models - openness, ease of management and administration, modularity, security - allow achieving the necessary reliability of operation with the optimal ratio of such parameters as cost, performance, and evolutionary development opportunities.

In 2021, Deloitte, in its article "Scaling AI in government," presented the forecast on AI importance for mission outcomes across all levels of government over the next five years (thus, for that moment, up to 2025) (see Figure 2 below) [14].

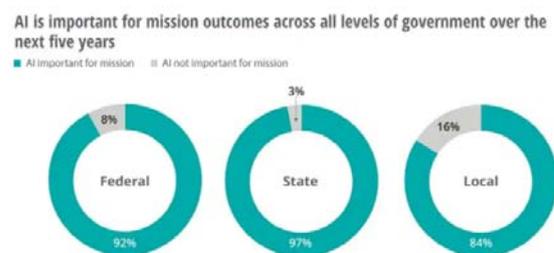


Figure 2. Forecast on AI importance for mission outcomes across all levels of government, 2021-2026

The creation of such systems should be based on conceptually unified integrated system architecture of software and hardware with broad functionality and implies the use of generally accepted standards. Indeed, the information necessary for the development and implementation of adequate political and managerial decisions is sometimes dispersed over a multitude of information funds and databases [68]. In particular, it can be obtained from the systems of defense, law enforcement, other ministries and departments, regional information funds, information banks of enterprises and organizations of various forms of ownership, independent analytical centers, news agencies, etc.

The goals of creating an expert-analytical subsystem (system) can include group intellectual support for such processes as: monitoring and control of the implementation of strategic planning documents; monitoring and control of indicators of socio-economic development and ensuring national security,

monitoring the effectiveness of the activities of participants in strategic planning; development, public discussion, and approval of draft strategic planning documents, information and analytical support for strategic planning participants in solving strategic planning tasks.

Such an information system for strategic planning, built on the basis of AI, will have to solve the following technological problems as [10, 12]:

- Widespread collection of statistical, sociological, expert information, as well as media materials with reference to the details of strategic documents;
- Classification of incoming information to determine the dynamics of public services market segments to ensure the growth of the quality of the latter;
- A comprehensive assessment of the state of implementation of documents, the relevance and causes of problems, key success factors, the effectiveness of the authorities;
- Assistance in the development and justification of effective solutions for the execution of documents using computer modeling and visualization.

To solve such problems, information-analytical and expert-analytical tools of this system will have to be aimed at providing:

- Proactive identification of threats and risks of strategic decisions execution based on the processing of operational and retrospective information;
- Conceptual and simulation modeling of strategic situations to identify the most pressing problems and issues, substantiate projects of strategic decisions;
- Organization of network expertise, holding strategic meetings with the involvement of external experts;
- Determination of such complex impacts on sets of factors and circumstances that will provide the greatest strategic effect, etc.

An increasingly significant component of this system is the mechanism of information-analytical and expert-analytical support for management decisions on the transformation of territories [70]. Unlike traditional management decision support systems, this mechanism should cover a relatively wider range of data types, ensure the synergy of actions of state, regional, municipal, and corporate leaders and specialists, as well as involve various segments of the population in the process of transforming territories.

The integration of artificial intelligence and machine learning into analytical systems is very critical in the field of regional, territorial, and cluster development, as well as in the so-called "points of growth", since often the "leveling policy" used in countries with a high degree of state participation in socio-economic processes (for example, Canada), turns out to be inefficient in the long run and contributes to even greater degradation of problem areas.

It is also important to take into account the political significance of the "leveling ("equalization") policy" that is not conducive to the introduction of investments: budget transfers directed to subsidized regions from the federal center help maintain stability and prevent tension which arose due to the failure of the state to fulfill its obligations on socially significant issues or unfavorable changes in market conditions. In political practice, "equalization" has been in demand historically and today is also used both in the course of implementing financial policy and as "emergency" measures. In the first case, it is about interbudgetary transfers (leveling subsidies), in the second case - about measures to support socially significant enterprises, regardless of their competitiveness (anti-crisis measures to save single-industry towns can be called a classic example). Nevertheless, experience shows that from an economic point of view, "leveling" is a costly, but not the most effective way of development. Systematic subsidies from the federal budget reduce incentives for depressed areas to develop independently

and to increase investment attractiveness. However, the development and implementation of such programs continues. In particular, in Canada, for the period up to 2025, rather large public investments are envisaged in the development of aboriginal tourism, while the share of the private sector in investments is expected at the level of 6%, and there is no talk of public-private partnership at all. Meanwhile, artificial intelligence and machine learning technologies would allow deep factor analysis of previous and current "leveling" programs (both national and foreign) and their systemic results, which, in turn, would allow more optimal and long-term oriented decisions to be made.

Thus, in the era of digital transformation of public administration, in order to assess the potential of using digital technologies in public management, the following characteristics of the public administration quality should be considered: the validity of public intervention; effectiveness; efficiency. The possibilities of using digital technologies to further implement results-based management and improve the effectiveness of public administration include: the use of big data and artificial intelligence to generate statistics and use it in public administration in real time; receiving and processing data based on machine-to-machine interaction; using artificial intelligence technologies to analyze data and develop optimal solutions.

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PUBLIC-PRIVATE PARTNERSHIP AS A TOOL FOR IMPLEMENTING STATE POLICY

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Abstract: The article discusses the theoretical and methodological foundations for the formation and development of public-private partnerships in the modern economy, the need and economic essence of public-private partnerships, as well as models and forms of interaction in such partnerships, including examples of the implementation of this mechanism in various countries and regions. It is shown that in the modern world the institution of public-private partnership is becoming more widespread and constitutes the basis for the implementation of various infrastructure, municipal and community development, etc. projects at all levels of government. Based on the elements of case study method, public-private partnership is considered as the basis for the development of socio-economic systems in modern conditions.

Keywords: public-private partnership; infrastructure; project; investment; priority national segments; sustainability.

1 Introduction

Currently, within the framework of economic globalization, there is a growing tendency towards intensification of relations between the state and private business in the direction of the penetration of capital into the sphere of state property. At the same time, the functions of the state and the tasks associated with expanding the influence of the private sector on the world economy are changing. In this regard, an essential condition for the normal functioning of a market economy is the constructive interaction between business and government institutions.

In the modern sense, the partnership between the state and business is an institutional and organizational alliance between the state and private companies, banks, international financial organizations, and other institutions in order to implement socially significant projects. The nature of this interaction, methods and specific forms may vary significantly depending on the maturity and national characteristics of market relations. At the same time, the state is never free from fulfilling its socially responsible functions related to national interests, and business, in turn, always remains the source and accelerator of the process, the increment of social wealth.

Public-private partnership (PPP) without exaggeration can be called a legal phenomenon of the third millennium, which has deep socio-economic roots and covers various legal systems. Since the beginning of the 21st century, PPP laws have been adopted by Japan, the countries of Africa and Latin America, Central, Eastern, and Western Europe, model laws appear in the USA and Great Britain. The development of guidelines and standards in the field of PPP is carried out by such well-known international organizations as the United Nations Commission on International Trade Law, the Commission of the European Union, the Organization for Economic Cooperation and Development (OECD), the International Bank and the European Bank for Reconstruction and Development (EBRD) [3, 22]. This form of partnership in the literature is usually referred to by the term "Public Private Partnership" (PPP), but also "public-private cooperation" sometimes is used.

A developing partnership, unlike traditional relationships, creates its own basic models of financing, ownership relations

and management methods. At the same time, the rational use of public capital is a necessary condition for the satisfactory dynamics of both a developed and a developing market economy. On the other hand, namely private entrepreneurship is distinguished by mobility, high efficiency in the use of resources, and a propensity for innovation. It is possible to use the advantages of both forms of ownership without deep social changes and upheavals within the framework of various forms and methods of public-private partnership [8]. The arsenal of these forms accumulated to date makes it possible, while unconditionally retaining the most important national objects in state ownership, to transfer part of the owner's powers to the private sector. At the same time, the economic partnership between the state and business allows attracting additional capital, in particular foreign capital, to the public sector, easing the acuteness of budget problems, and shifting the main part of the risks to the business sector. In such a system, the resources and potentials of two economic entities are combined - the state in the form of its ownership and private business in the form of private entrepreneurial principles of management, investment, control, and innovation.

At present, the most active partnership between the state and business is carried out, first of all, in the real sector of the economy - in the segments of industrial infrastructure (energy, railway transport, roads, ports, airports, main gas transportation, public utilities), i.e., in the industries that form the basis of the life support of the economy and society. Large-scale experience in the redistribution of property rights between the state and private business is also available in the so-called public service sectors (in particular, in the infrastructure sectors). Namely in these sectors, the traditions of delegating a number of key powers by the state to the private sector have historically developed [4, 5]. The state is responsible to society for the uninterrupted provision of its public goods, which in principle explains the tendency to preserve the relevant sectors of the economy in state ownership, introducing a kind of private goods that create conditions and prerequisites for the effective functioning of infrastructure facilities, optimal management of them, rational use of resources in the traditionally public sector of the economy.

All of the above indicates the importance of studying the formation and development of partnership institutions, designed to play a significant role in the development of modern market structures and relations, especially in the digital economy and against the backdrop of the Industry 4.0 landscape.

The transition to a digital economy has led to the assignment of new tasks to PPPs for the development of intellectual, scientific, technical, and implementation activities. In modern conditions, the implementation of innovative projects in the era of the digital economy can no longer be fully funded from the budget, the possibilities of which have recently been noticeably reduced due to the reallocation of funds to more demanded positions. Now, the implementation of such projects largely depends on the involvement of representatives of the business sector and the use of their significant potential.

2 Materials and Methods

The methodological basis of the study is an integrated approach and dialectical principles, which made it possible to identify the essential characteristics of the studied processes of creating and developing successful PPP projects in their various models, the forms of their manifestation, highlight their inherent contradictions and determine their development trends. The study was conducted using the methods of logical, comparative, historical, and statistical analysis. When analyzing country-based trends and socio-economic results in the field of PPP, elements of the case study method were applied.

3 Results and Discussion

In the world scientific discourse devoted to the study of public-private partnerships, there is no unity in its understanding, and even the principles for defining public-private partnerships are established differently not only at national levels as whole, but also in various sectors and areas, cover many types of contracts and interactions between the state and the private party [15]. Having been developing for a considerable time, PPP has taken various forms and includes a significant number of examples of the practical implementation of partnerships between the public and private sectors, showing, according to experts, "variability along the spectrum from greater responsibility of the public sector to greater responsibility of the private party" [17]. Public-private partnership is understood as a type of state policy, as a management tool, as a specific form of project implementation, and as a broad socio-economic phenomenon [18].

Nevertheless, the analysis of studies on the concept of PPP leads to the conclusion that most scientists consider it as a mutually beneficial cooperation based on the distribution of risks and aimed at achieving the goals set by the Government. For example, many authors understand PPP as the involvement of the private sector in order to achieve the objectives of socio-economic development by a public partner in the performance of maintenance, operation, reconstruction, modernization, construction of public infrastructure facilities, the provision of public services using them on the terms of long-term mutually beneficial cooperation, sharing of risks, competence and responsibility, by concluding and executing a PPP agreement [29].

The main characteristics of the partnership between the state and private investors are the following: legal registration of relations between partners, regulating their rights, duties and responsibilities; equality of economic interests between partners and freedom to make managerial decisions within their competence; non-intervention of the state in the sphere of responsibility of private partners; long-term (at least three years), mutually beneficial nature of cooperation, common interest in the innovative development of the territory; joint capital investments in the form of investment projects; the principle of competition, holding tenders for the development of individual projects to reduce costs; improving the efficiency of the use of budgetary funds; guarantees to a private investor of a preferential and stable tax regime for the entire period of the investment project implementation; equal (non-discriminatory) treatment of foreign companies; the principle of mandatory consideration of environmental requirements, social living conditions of citizens and their safety.

The models and structure of the PPP itself are very diverse, but they are united by some characteristic features that make it possible to single out partnerships as an independent economic category [7]. The partnership is built as a formalized cooperation of public and private structures, specially created for certain purposes, and is based on the relevant agreements of the parties. Equity or share participation of private capital in a state enterprise (joint venture) implies a higher level of integration of public and private capital in the implementation of partnerships to achieve socially and economically significant goals [25]. Within each of institutional alternatives to PPPs and the many specific options for the distribution of power between the public and private sectors, it is possible to use effective incentive systems that correspond to the concentration of property rights.

PPP is not a simple addition of resources, but synergy. Moreover, it should be understood that each of the parties to the partnership has its own goals, solves its specific tasks, and has different motivations. Thus, the state is interested in increasing the volume and improving the quality of services provided to the population and economic agents by infrastructure and socially oriented industries. The private sector, on the other hand, seeks to consistently receive and increase profits [19, 27]. Moreover, a strategically thinking business builds its priorities, first of all, not just according to the size of profits, but in the interests of sustainable receipt of income from projects. At the same time, both parties are interested in the successful implementation of

projects in general. PPP projects often make it easier for the national business community to enter the world capital markets, activate the attraction of foreign investment in the real sector of the economy. PPP is of particular importance for the regional economy, where it is the basis for the development of local markets for capital, goods, and services. However, the interests of the state and business may not just not coincide, but may even have an opposite character [16, 28]. Therefore, the signing of a partnership agreement should be preceded by complex (often, difficult) negotiations between the parties, balancing these interests and the goals of the projects.

Each of the parties to the partnership contributes to the overall project. On the part of business, such a contribution is: financial resources, professional experience, effective management, flexibility and efficiency in decision-making, the ability to innovate, etc. Participation of the business sector in joint projects is usually accompanied by the introduction of more efficient working methods, improvement of equipment and technology, development of new forms of organization of production, the creation of new enterprises, including those with foreign capital, the establishment of effective cooperative ties with suppliers and contractors. The labor market tends to increase demand for highly skilled and well-paid occupations [11-13]. The contribution of the state to PPP projects is the authority of the owner, the possibility of tax and other benefits, guarantees, as well as the receipt of certain amounts of financial resources. The state, as the dominant subject and the main regulator, has the right to redistribute, if necessary, resources from purely production programs to social purposes (education, health care, science, culture), and in many cases this not only contributes to the overall improvement of the socio-economic climate, increases the investment rating of the country, but also directly affects partner projects. Moreover, in PPP, the state gets a more favorable opportunity to focus on the performance of its main functions - control, regulation, observance of public interests.

In the 1990s, a qualitatively new stage in the development of public-private partnerships began in Europe, where the modern concept of such interaction was formed. The legal framework for the development of public-private partnerships in the territory of the European Union is the "Green Book on Public-Private Partnerships" [1]. This law establishes that the concept of public-private partnership refers to forms of cooperation between public authorities and the private sector in the implementation of public tasks, in which the necessary resources are jointly managed, and project risks are allocated in an appropriate way based on the risk management skills of project partners [65].

A significant contribution to the development of the PPP mechanism in Europe is the experience of the British system, and in particular the public-private company Partnership UK, which was formed thanks to the "Private Finance Initiative" program of the government of John Major.

Created in 2000 on the basis of the Treasury Task Force group, a special public-private company Partnership UK, 51% owned by the private sector represented by private equity funds and banks, and 49% belonging to the Government of Britain and Scotland, Partnership UK acts as a consultant, appraiser, and project developer for public-private partnership in cooperation with public authorities. The main goal of Partnership UK is to create and systematize new cooperation tools and standardize existing contracts between public authorities and private companies. Also, this organization contributes to the creation of similar structures in other countries: the Portuguese Parública, the Canadian Partnership BC, Infrastructure Ontario were created with the help of Partnership UK [2].

The countries of the European Union create their own country organizations with similar functions - for example, the Spanish agency SEITT, the German organization Partnerschaft Deutschland, etc.

To date, the EU countries have the most developed regulatory and practical framework for regulating the sphere of public-private partnership, which has already gone beyond the

boundaries of one country and spread to the whole of Europe. Directive 2004/18/EC and Directive 2004/17/EC regulate public-private partnerships in the field of water and energy supply, transport, public contracts for the supply of goods and services [14, 18]. The above-mentioned "Green Book of Public-Private Partnership" is a unified methodological base in the field of public-private partnership in the territory of the European Union.

The main financial model for PPP in Germany is state forfeiting (65%) [22]. This model is built on the interaction of three participants: the state body, the project company (the SPV company), and the creditor bank. The SPV-company partially sells to the bank the obligations of the state body to it, arising from the contract for the construction of the facility, and in the future, the bank becomes a creditor for the state. In this regard, the risks of improper performance of work by the project company, bankruptcy of the project company arise, assumed by the state party, as well as operational risks associated with control over the implementation of the project. This model contradicts the idea of risk sharing, since in case of low productivity, the private partner does not lose payment [21].

In Canada, an SPV-company enters into an agreement with a government agency that is tasked with reducing most of the design, construction, and operational risks for subcontractors. In particular, SPV signs agreements on financing from one or more sources, such as debt from the private sector, debt from domestic and international banks, pension funds, insurance companies, or bond investors with limited maturities [23, 24]. The return of funds from lenders is a regression of the flow of payments available to the SPV under the project agreement over the life of the project. In practice, a wide range of PPP types are used, including such as "Design-Build-Finance-Own" (DBFO), "Design-Build-Finance-Maintain" (DBFM), or "Design-Build-Finance-Operate-Maintain" (DBFOM), based on the British private finance initiative model, which involves a long-term concession and includes significant financing and risk taking by the private sector. It should be emphasized that in Canada, PPP is not considered as the privatization of public assets in the event of a complete or significant disposal of public sector assets [62].

In 2016, the Canada Infrastructure Bank was created, a federal Crown corporation that provides loans for the implementation of PPP projects in the development of public infrastructure at a reduced rate. A Canadian PPP Project Fund (P3 Canada Fund Projects) was also created to finance infrastructure projects (at federal, state, and local levels) aimed at economic growth or sustainable development of communities.

In some provinces, regional governments have created their own specialized departments or agencies, but in the regions of Canada with Arctic territories - Nunavut, the Northwest Territories, and Yukon - such structures are absent. Although PPP is not as widely developed in these regions as in Canada's more southern provinces, Nunavut and the Northwest Territories have experience with PPP projects and are increasingly considering the use of PPP in social infrastructure development initiatives. The only exception here is Yukon, where the provincial government prefers the traditional model in the implementation of socially significant infrastructure projects in the social sphere. In the Arctic northern regions of Quebec, there is also no experience of public-private partnerships, however, the provincial government plans to expand the practice of implementing PPP projects in these areas in the future and invest about \$80 billion in the next 20-25 years [67]. The provinces of Canada have developed policies and guidelines used in the evaluation of PPP projects, and while these documents are not mandatory, they contain best practices and standards and serve as information banks for various stakeholders involved in the infrastructure PPP projects. In recent years, some municipalities have also issued regulations to ensure transparency and consistency in the implementation of public-private partnerships in local communities [31, 32]. Participation of this level in the PPP market is expanding - Canadian municipalities are increasingly interested in PPPs as an alternative form of financing, since a growing population and aging infrastructure

require renewal of resources and the development of social sectors. One such industry where public-private partnerships are, in principle, regarded as the most preferable mechanism for ensuring the modernization, construction, financing, maintenance (etc.) of infrastructure facilities is the healthcare system - namely in this area, a third of all PPP projects in Canada have been implemented. (102 out of 290) [67]. And despite the fact that the implementation of PPP projects in healthcare is often criticized, their impact on the economic and social development of communities is generally assessed positively, especially for the country's remote North Arctic territories.

The experience of PPP in the United States also has a rather long history, during which the concept of public-private partnership was developed as an agreement where a private company, in an agreed and approved form, is allowed to participate in state ownership, as well as perform functions that traditionally lay in the responsibility of state power.

In the United States, a large number of mechanisms and institutions have been created that contribute to the dynamic development of the practice of public-private partnerships, but the leading role belongs to the National Council for Public-Private Partnerships (NCP3P). Its main functions include information support for PPP, providing links between the private sector and public authorities, educational activities and removing obstacles to the implementation of public-private partnership projects. Board members are 130 private organizations and government representatives, including Bank of America Merrill Lynch, Deloitte, Parsons, Office of Public-Private Partnerships, District of Columbia. Representatives of the private sector are companies that occupy leading positions in their industries and have rich experience in implementing PPP projects, representatives of government bodies are departments and specialized institutions of public-private partnerships of seven states [26]. Until 2015, in the US, public-private partnerships were mainly presented in the form of concessions on toll roads. The US federal government has plans to implement social infrastructure targets, but projected spending exceeds current budget constraints. It is worth noting that US infrastructure has traditionally been financed with tax-exempt municipal bonds, which means that a significant increase in the infrastructure spending is likely to require additional funding sources [65]. Partnerships between public and private sectors (P3) represent an increasingly popular funding alternative. In the US, private financing of infrastructure projects is expected to be strengthened, especially if legislative support for private financing with tax incentives is adopted [26]. PricewaterhouseCoopers' analysis notes an increase in P3 project implementation over the past few years as local governments seek to use P3 infrastructure projects as a way to bridge the budget gap. Transport is a leader in the use of the PPP mechanism, but projects in the field of energy, waste and water, and social infrastructure are widely represented. In fact, the biggest constraint on infrastructure investment today is the lack of suitable, bankable deals.

In 2018, through a public-private partnership between the City of Anchorage, housing authority Cook Intel Housing, WeidnerApartmentHomes, the Rasmusson Foundation, the First National Bank of Alaska, and a number of other local foundations, businesses, and community organizations, the Path to Independence project was launched, under which the homeless are provided with housing, financial assistance, and employment. The initial funding for the project was \$650,000, and the total number of public and private sector participants is more than 203. It is noteworthy that in 2019 this project was awarded the Strong Communities Award, established by the Federal Mortgage Bank of Des Moines (FHLB DesMoines). The award in the amount of \$15,000 received by the First National Bank of Alaska was directed to the ongoing PPP project [65].

In May 2020, the Alaska Mental Health Authority (AMHTA) invested \$500,000 in the Home for Good Anchorage PPP project, implemented since 2019 by the United Way of

Anchorage in partnership with numerous private and public organizations. In June 2020, AMHTA awarded 62 grants totaling over \$1.2 million to local partner organizations that could provide services to AMHTA beneficiaries affected by COVID-19. The private party also allocated about \$1.5 million for the implementation of this PPP project [16].

Another example of the implementation of PPP projects aimed at the development of the social sphere is the creation of a nationwide wireless broadband network FirstNet in all states, including Alaska. The concession agreement signed in 2017 between the First Responder Network Agency (FRNA), representing the government in this PPP project, and the mobile operator AT&T with a total capital intensity of about \$45 billion, includes the creation, operation, and maintenance of a special network for all services of emergency care (medical, police, fire) [8].

However, the American model has serious limitations. First, PPP projects are implemented only by American contractors. Thus, the participation of a foreign investor in public-private partnership projects in the United States remains practically inaccessible [34-37]. Secondly, there is no uniform legal basis for public-private partnerships in all states, which creates institutional and political obstacles. Thus, the development of the practice of public-private partnership is hampered by the lack of uniform legislation and limited access for foreign investors.

As a result, when evaluating the US experience, it can be concluded that partnerships are most often created and regulated at the municipal level, where projects in the field of road construction and utilities prevail.

Initially seen in the United States and Canada as an innovative way to implement infrastructure projects, public-private partnerships developed in the territories of these two North American countries due to the fact that the public sector, limited in funds, sought such infrastructure development that would stimulate the economic growth, while the private sector was looking for productive investments, but with greater income security. Under such conditions, PPP has come to be seen as an effective way to ensure that both parties maximize their benefits: the desire of the public sector for the common good, and the private sector' striving for the efficient use and savings of funds [8].

PPP projects, during their implementation in the global space, have proven their effectiveness in many countries, but the scale of replication at the international level is very different. In Canada, the formation of public-private partnership dates back to the early 1990s [15], when the first PPP projects were implemented in the development of the education system (building schools in Nova Scotia and New Brunswick), transport infrastructure (highway 407 and the Confederation Bridge), health care (Royal Ottawa Hospital and Brampton Civil Hospital in Ontario). Later, public-private partnership in Canada has received significant development, including in terms of shifting the direction of this institution towards a greater representation of the interests of society and the satisfaction of socially significant needs.

In the United States, until the early 2010s, public-private partnership projects were not so widespread. This was largely due to the well-developed municipal bond market, which provided local administrations with resources for the development of public infrastructure [15]. However, the global financial crisis of 2007-2008 significantly reduced the ability of the bond market to finance such initiatives. And namely this factor appeared among of the main ones that influenced the development of the PPP institution in the United States. The main area of application of the PPP mechanism in this country initially was the transport infrastructure, but over time, on the terms of public-private partnership, projects in the field of development of social infrastructure facilities have increasingly been implemented. At the same time, both in the USA and Canada, public-private partnerships have not been considered exclusively as a source of financing. Rather, such projects were evaluated collectively - as an opportunity to obtain additional funding and improve the efficiency of public infrastructure.

The BRICS countries also show positive dynamics in the development and application of public-private partnerships. The Chinese practice of attracting large investments through PPPs has been going on since the early 2000s. In China, PPP projects are used in the construction of railways and subway lines. More than half of the infrastructure facilities intended for the Olympic Games in Beijing were built on the basis of PPP mechanisms [3].

In South Africa, there is an independent PPP department, consisting of various units (financial, legal, business development, design and evaluation, municipal). The activities of such management body are carried out at the expense of state budgetary funds. The powers of the PPP Department include consideration and analysis of feasibility studies for proposed projects, organization and conduct of public tenders, signing of contracts with their winners, as well as supervision and control [9].

To substantiate the thesis that public-private partnership is a tool that links the elements of the sustainable development concept, it is expedient to pay attention to excerpts from some documents adopted as a result of international meetings. Thus, the final document of the UN General Assembly "Transforming our world: The 2030 Agenda for Sustainable Development" adopted in 2015 contains 17 global goals and 169 corresponding tasks; for the first time, in a UN document a call to action, addressed to the private sector, was clearly heard. Let us pay attention to the last, seventeenth goal, formulated as "Partnership for sustainable development". The goal is to "strengthen the means of implementation and revitalize the work of the Global Partnership for Sustainable Development" [38-44]. An analysis of the tasks that contribute to the implementation of this goal shows that, to a greater extent, the goal lies in the global partnership of governments of states for the joint achievement of sustainable development, however, it should be carried out with the participation of many stakeholders, stimulating and encouraging effective partnership between government organizations, between the public and private sectors and between civil society organizations, drawing on the experience and strategies of using partners' resources. In this connection, one can rightly argue that the interaction of the state, economic entities, and the public concerned in the environmental sphere is nothing more than an effective mechanism for achieving sustainable development goals, officially proclaimed at the international level.

The world practice of partnership in the infrastructure sectors shows that each of the economically developed countries has its own top-priority industry for the use of PPP. In the United States, such an industry is roads, in the UK it is healthcare and education, in Germany it is education, in Italy and France it is healthcare [10].

The creation of territories of advanced socio-economic development largely depends on the investments of budgets of all levels and participation by domestic and foreign investors in the form of investments, which is eventually combined into a common project and indicates the coexistence of public-private sector resources [45, 46]. Namely in the course of the creation and fruitful functioning of the territory of advanced socio-economic development, the goals and objectives of the state policy in the field of creating new jobs, infrastructure facilities can be achieved, while the private sector will receive the planned dividends in the form of income from the organization of production.

In recent decades, the role of government structures in the provision of infrastructure services has changed: while remaining their guarantor, the state is increasingly no longer their supplier; in fact, the private sector is playing an increasingly important role in the provision of such services [29]. An urgent problem is that the PPP approach may lead to less careful selection of projects by public authorities and further inefficient management [33]. Political risk factors, macroeconomic failures and improper contract structuring undermine the effectiveness of infrastructure investment, especially in developing countries, leading to an unfavorable attitude towards PPPs [65]. However, the optimal distribution of

risks levels out economic costs, introduces incentives for effective management, and reduces the need to renegotiate contracts in the future, including at the request of creditors [68]. An analysis of the effects of market reforms in the electricity industry in 27 OECD countries determined that both privatization and regulation have a negative impact on the market, while market liberalization brings positive changes [17].

The creation and modernization of electricity generation, transmission, and distribution facilities through PPP mechanisms are a new form of investment attraction. PPP can be attractive for the development of cost-effective, low-carbon, climate-specific infrastructure projects, provided there is sufficient institutional capacity, a stable regulatory environment and proper structuring [25]. PPP, focused on innovative model of the integrated development of natural resources, has significant prospects. According to international practice, PPP mechanisms are an important aspect in supporting knowledge-intensive energy industries, including in the field of renewable energy. Public-private partnership mechanisms are applicable not only at the stage of commercial exploitation of technology, but also at the stage of research. One of the most interesting examples of such a research partnership is the Algae Testbed Public-Private Partnership, which was established in the USA [16]. Algae-based bioenergy technologies have great development potential, they represent one of the most promising renewable energy technologies. However, at present, these technologies have not yet reached the stage of commercial application due to high costs. Further R&D and demonstration projects are still required to improve technology performance, reduce risk and uncertainty, and diminish costs. Namely for the purpose of such research projects, a consortium has been created that brings together academic institutions, commercial enterprises, and national laboratories of the US Department of Energy, as well as numerous testing laboratories located in different geographical conditions [48, 49]. The aim of the consortium is to obtain cost-competitive algae-based biofuels. The world has accumulated a fairly solid experience of public-private partnership in the field of renewable energy, which is represented primarily by mechanisms for the return of funds from private investors invested in renewable energy projects. In the US, such mechanisms are mainly electricity purchase agreements, in other countries – “green” tariffs and tenders for the selection of renewable energy projects.

In many countries, the development of renewable energy is faced with a large number of obstacles. The most important problem of the industry is that some players (companies or individuals) invest in it, while the benefits are enjoyed by the whole society together [51-56]. The result is the so-called “free rider effect”, a situation where those who bear the cost may not always be able to collect payment from those who receive the benefit, since “free riders” cannot be excluded from the number of users of the service. One of the solutions to this problem is the use of public-private partnership mechanisms [57-61]. In this case, PPP is especially commonly understood as medium-term or long-term interaction between the state and business in order to solve socially significant problems, in which the private sector assumes significant risk and responsibility for management.

Countries with different levels of development have different quality elements for the development of the advanced industry of tomorrow. But even the most well-resourced (in organizational, legal, and financial planes) countries such as the USA and Germany cannot guarantee success in mastering the latest technologies if the work of the subjects of national innovation systems is not coordinated (in the triangle “state - business – universities”). Coordination and long-term, strategic thinking is the main prerequisite for the success of the strategic and technological development of countries and regions [63, 64, 66]. And public-private partnership in technology can no longer not be a necessary (albeit not always sufficient) condition for national competitiveness.

The modern technological revolution to varying degrees affects the rate of change in different technologies in various spheres

and areas of the world economy (the technological map of changes is very diverse and even in theory cannot be determined with a sufficient degree of clarity). But the practice of PPP implementation in the world shows that PPPs can always help speed up the process of cooperation between the elements of the R&D of countries and regions for the development of any technology, at any stage of their individual, specific industry maturity. In this regard, PPP structures can help both the birth and development of the entire technology system at an optimal pace. The passage of the so-called “valleys of death” of new technologies is increasingly impossible without PPP.

The United Arab Emirates can rightly be proud of unusual projects: the tallest building in the world, an artificial island in the shape of a palm tree. Now the Middle Eastern state has a new ambition - to connect not only cities with a railway laid in the desert, but also countries. The UAE ranks 115th in the world in terms of area and has a population of about 9.5 million people, 80% of whom are foreigners, while infrastructure projects worth tens of billions of US dollars are underway [50]. In 2015, the UAE issued a new law designed to develop cooperation between private capital and public authorities in the implementation of public projects. The law defines the conditions for public-private partnerships and establishes a ceiling on the cost of projects, decisions on the implementation of which can be made by heads of government departments. At the departmental level, the fate of projects worth up to 200 million dirhams (54 million US dollars) can be decided, while projects worth up to 500 million dirhams can be approved at the level of the financial department of the emirate, and above this amount - at the federal level [50]. Executives, top managers, and sustainability experts from various national and international companies in the UAE highlight the importance of cooperation and joint action between the government, the private sector, and society in order to promote the transition to a sustainable circular economy in the country and around the world, and to achieve the Sustainable Development Goals. Among the latest circular economy initiatives and programs, there are those announced by the UAE Government, in particular, the UAE Circular Economy Policy - a comprehensive framework to define the country's approach to achieve sustainable management and ideal use of natural resources by introducing consumption and production practices that ensure the well-being of the current and future generations [66]. The policy includes several key objectives, in particular, those promoting environmental health, supporting the private sector in adopting environmentally friendly production methods, and reducing natural environmental pressures to achieve the country's vision as a global green development pioneer. Moreover, the policy provides a framework for setting priorities in terms of consolidating the concept of the circular economy in several priority sectors, in particular in green infrastructure, sustainable transport, sustainable manufacturing, sustainable production and consumption of food, as well as in other areas such as technology, innovation, research and development, while raising awareness, building capacity, building partnerships and collaboration platforms, and achieving integrated waste management [70]. These policies and their results are expected to bring significant economic benefits to the country, mitigate the environmental burden, secure the supply of raw materials, increase competitiveness, motivate innovation, enhance economic growth, and create jobs.

It is worth noting that within the same framework, the UAE Circular Economy Council was established, the purpose of which is to oversee the implementation of the strategy in coordination with the relevant authorities, as well as approve performance indicators related to the adoption of the strategy, harmonize federal and local strategies within the framework of policy requirements, offering a common framework for sectoral plans and projects, encouraging the participation of the private sector in projects and initiatives related to the circular economy, promoting partnerships between the public and private sectors, and facilitating scientific research in relevant areas.

It is advisable to cite some indicators that illustrate the role of infrastructure in the development of the non-oil economy for the

UAE. Back in 2016, a global infrastructure investment rating was prepared, evaluating the markets of more than 40 countries in terms of attractiveness and opportunities for investors, companies participating in contracts, in which the UAE took 3rd place in the world (up from 4th place in 2012). As noted, the UAE successfully relied on public-private partnership (PPP) mechanisms and maintained the course for the implementation of new projects, especially in Dubai, despite the strongest drop in world oil prices in 2014-2016 [16].

In general, breakdown of completed PPP projects during the period of 2009-2016 in developed countries is shown on the Figure 1 below [47].

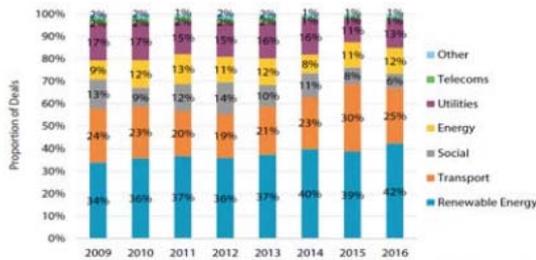


Figure 1. Completed Infrastructure PPP deals by industry, 2009-2016

When choosing a specific option for the implementation of a PPP project, it is important to initially determine as clearly as possible the role of the state, which, in accordance with the proposed classification, can be passive (if, for example, a public authority acts exclusively as a tenant), parity, or leading [71]. In the latter case (for example, when implementing the most socially significant projects, the transfer of which to non-state ownership is inexpedient), a private investor may play a secondary role (for example, acting as the owner of a non-controlling part of the project).

It is also important to classify the types of PPP depending on the ownership of the partnership object. As a rule, in this area, in one form or another, there are two proprietary rights: the right of ownership and rent. However, in our opinion, the development of types of public-private partnerships based on the use of other real rights provided for by law, such as, for example, the right of economic management or operational management, is also promising - such rights are narrower in content in comparison with the right of ownership, but at the same time allow the state to more carefully control the progress of the project and reduce the risk of dishonesty on the part of representatives of private business.

Depending on the urgency factor, it is possible to single out a PPP with a strictly established period (for example, a conventional concession for the development of subsoil), a PPP that is implemented before reaching some economically or socially significant goal (for example, a PPP to train teachers in the region in information technology or to improve the territory at the expense of private companies with the provision of any preferences to the latter in the given territory - the specific terms of such projects can be quite "vague", but the criteria for achieving the goals of the partnership in any case should be formulated as clearly as possible), as well as a conditionally unlimited partnership, in the contract of which a specific completion date is not clearly defined.

Meanwhile, critical success factors for PPP, for example, in construction industry, do not differ much between regions, which is evident from the comparison of the UAE and UK (see Figure 2).

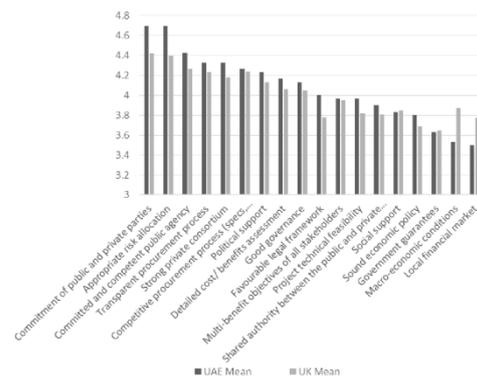


Figure 2. Critical success factors for PPP: A comparative analysis between the UAE and the UK [2]

In world practice, the choice of a PPP mechanism for the implementation of a project is justified only after assessing its feasibility for the public side in comparison with existing (or hypothetical) alternatives. This is the basis of the Public Sector Comparator (PSC) - a special quantitative analysis tool that allows comparing traditional project organization models, in which the private sector acts as a contractor under a public contract, with a particular PPP model. PSC makes it possible to determine the costs (including contingent liabilities) and benefits for the public side associated with the participation of the private sector, and even the best business partner for the implementation of a joint project [30].

The PSC method is based on the concept of "value for money", which is also known in the context of the cost and quality ratio optimization. The PPP mechanism is considered as one of the potential opportunities to spend budgetary funds more efficiently, for example, by transferring some risks to the private party. In a number of countries, PSC has become, in fact, the state standard and the basis of the routine procedure for substantiating the method of organizing the implementation of state projects [21].

In world practice, various mechanisms are used to effectively implement PPP projects. In publications on PPP issues, as a rule, there are five main models of partnership between the public and private sector: the model of operator; cooperation; concessions; leasing; contracts [14]. These PPP models are implemented in practice through certain mechanisms (for example, construction - operation / management - transfer (concession)).

Recently, such a form as a "life cycle contract" has been increasingly used between public and private partners. In this case, the public partner does not invest in the object of the agreement. Design, construction, and commissioning of the facility is carried out at the expense of the contractor. The public partner does not finance the facility itself, but only the maintenance services of the existing facility during the entire period of its operation on the principle of "no service - no payment". The implementation of projects through this PPP model allows speeding up the time of putting the facility into operation, since the payment for the service by the public partner arises only after its commissioning. In addition, innovation and high technology are used more widely, as the savings from their application go directly to the contractor. Prerequisites are created for the performance of work at a high quality level, since in the event of a failure, all costs for the repair of the facility are borne by the contractor. All this leads to a significant reduction in the cost of the facility and its maintenance, more rational spending of funds, and a reduction in technological and project risks.

However, the choice of a particular form of partnership is influenced by the objectives of the PPP project and its economic efficiency. A serious influence on the choice of model is exerted by such factors as: features of the country's legislation; industry affiliation of the PPP project; investment risk distribution

scheme; experience in contract management; determination of final payers for the facility's services.

It should be noted that public-private partnership is a new driver of digital transformation. For example, the National Innovation Strategy of the UAE was part of the Vision 2021 program. In this program, digital technologies were identified as one of the seven priority national sectors. The emphasis in digitalization is on the development of smart cities, software, as well as initiatives that include advanced technologies, such as artificial intelligence, nano-technologies, and the rapid introduction of high technologies in various sectors of the economy. In particular, the government's plan to develop Smart Dubai and Smart Abu Dhabi implies collaboration between private and public partners to promote effective urban experiences that provide a safe and comfortable environment for residents and visitors [2].

Saudi Arabia, in its Vision 2030 program, declares a very ambitious goal: to become one of the leading countries in the world, determined on the basis of the E-Government Survey Index. In addition, in accordance with the Kingdom's National Transformation Plan 2020, digitalization is included among the four priorities. This document outlined the creation of 5 digital platforms, the implementation of 29 information and communication initiatives in key sectors of the country's economy. Along with this, the National Transformation Program 2020 provided for solving, for example, such important practical tasks as improving the efficiency of healthcare through the use of digital technologies, creating technology companies to participate in the development of the local ICT sector. Mostly, these goals set were met until now.

In order to achieve the goals set in Vision 2030, the Digital Transformation Program was launched in the kingdom, in accordance with which the Fekra Tech platform was created to solve, first of all, problems in the field of Saudi healthcare. As a result, fifteen business models for the digitalization of medical services were proposed, which, through the introduction of "smart" hospitals and clinics, telemedicine and the Sehhi mobile ambulance, made it possible to halve the personal visits of doctors to patients and the waiting time for consultations and assistance from months to weeks, and in some cases up to five minutes [1]. In addition, the Digital Saudi platform oversees the activities of the National Committee for Digital Transformation in order to ensure acceptable economic and social impact from digital transformation projects in partnership with the private sector and entrepreneurs.

In August 2019, it became known that Saudi Arabia wants to build a super-city of the future in the middle of the desert. The new city was named Neom (NEOM). It should be located on the coast of the Arabian Peninsula near the border with Jordan. According to the initiators of the project, in terms of development, the city should overtake Silicon Valley, Hollywood, and the French Riviera combined [20]. The preliminary cost of the project, supported and financed by the Saudi State Investment Fund, as well as a number of private companies, is \$500 billion. All the latest achievements of science and technology will form the basis of the construction and life of Neom. Neom's economy will prioritize nine areas, including digital technologies, new energy, biotechnology, and media. "The focus on these sectors will stimulate economic growth and diversification," the Saudi authorities are sure [69]. This scale of the project was made possible namely thanks to its reliance on public-private partnerships.

Bahrain's digital strategy focuses on eight pillars: increasing community participation; development of partnership between the state and the private sector in the promotion of information and communication services; increasing the digital literacy of the population and civil servants; achieving a higher level of performance; ability to cooperate; government efficiency; offering quality services and strengthening communication channels with e-government; development of innovations and entrepreneurship.

In general, the structure of PPP projects by sector in Gulf countries looks as follows (see Figure 3 below) [30].

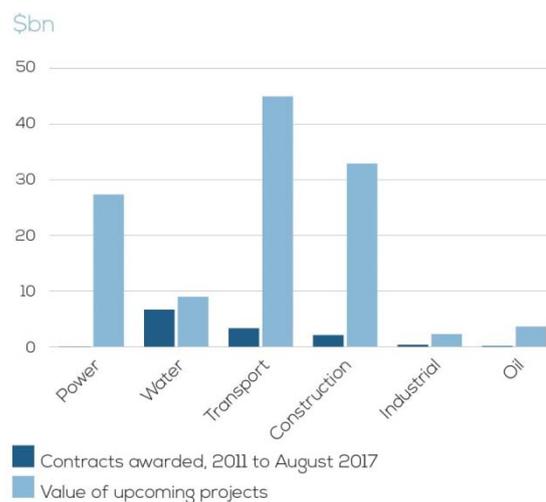


Figure 3. GCC PPP projects by sector

Separate mention should be made of the so-called GovTech - a digital approach to the modernization of the public sector, which can improve the quality of public services, simplify interaction with civil society, and increase the efficiency of public administration. The concept of GovTech can mean a number of very different areas of activity: from the formation of a "smart" urban environment to the use of digital tools to combat crime. GovTech has enormous potential, but turning digital initiatives into tangible, measurable, and consistent results in most countries remains a challenge. Moving towards GovTech requires a unified nationwide approach to digital transformation, the creation of a transparent management and decision-making system, and the use of the potential of public-private partnerships to attract competencies, innovations and investments from the private sector. The state purchases digital products or participates in the development of new software solutions through PPP mechanism.

In general, world practice shows that public-private partnership is an effective and flexible mechanism for attracting private investment for the implementation of capital-intensive facilities of particular importance to society. Despite the difficulties in implementing the PPP tool, it allows achieving optimal high quality results. The success of its implementation largely depends on a well-developed legislative framework, an established institutional environment, economic and organizational solutions to all aspects of existing problems. PPP contributes to the diversification of the economy in accordance with the strategic goals of the authorities, resulting in a high standard of living for service consumers, that is, for society as a whole.

At the same time, it is important that each PPP project has an evaluation mechanism from the very beginning, which allows each time during the entire life cycle of the partnership, including when changing project stages, at periods agreed by the participants or in the event of non-standard situations, to conduct regular analytical efficiency calculations. Conceptually, it is about creating a kind of monitoring system for regular and proactive performance evaluation (in a wider space than traditionally considered in the tasks of evaluating investment projects) and, as a result, identifying ways to ensure it at a level that satisfies each of the partnership participants.

Of course, the implementation of PPP projects does not bring only advantages and benefits. There are some general potential problems that may arise during the implementation of a particular project, such as the possible loss of public control and future government revenues, the risk of bankruptcy, etc. At the same time, PPP projects are relatively risky, but highly

profitable investments, which, combined with complex agreements and contracts that provide guarantees for both parties, make public-private partnerships an effective mechanism for their implementation and financing.

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DEVELOPMENT OF CONSTRUCTION PROJECTS AS A COMPOUND AGGREGATED SYSTEM

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Abstract: The article considers development as a modern form of investment activity in the real estate market. Features of development projects are outlined, and problematic issues of designing and implementation of development projects are identified from the point of view of an aggregated system approach, which is using the latest information technologies. Development is also considered within the framework of the urban development ecosystem, which is also a component of the principle of an aggregated system. The practical significance of the study lies in the fact that the main theoretical and methodological provisions can be used both for further theoretical research and in the practical activities of economic entities of the construction complex in order to improve project management and increase the efficiency of construction organizations and urban planning as whole.

Keywords: development; real estate; gentrification; Big Data; ecosystem; urban planning.

1 Introduction

The effective development of the investment and construction complex requires the use of new technologies, the introduction of progressive forms of production organization, the use of modern materials and products, which is impossible without relying on modern management theory, an integral part of which is the theory of project management. This is due to the fact that finding the optimal way to implement a project on time with the most efficient use of resources is a key success factor, and with ever-increasing competition, it is a guarantee of the construction organization's survival. The project approach to management has already proven its effectiveness in practice and is used by the world's leading companies.

At the present stage, the investment aspects of construction activities have been considered for a number of years as the most important component of a systemic vision of the processes that lead to the creation of finished construction products [1]. Starting from the analysis of theoretical aspects, it is also necessary to note the importance of optimizing investment and construction activities, which can be carried out through development tools - managing the creation, qualitative transformation, operation, and market value of real estate objects [10]. The concept of "development" is the initiation, development and promotion of projects related to the creation of new real estate objects and the reconstruction of existing ones for the purpose of making a profit [20]. The creation of each real estate object is a special investment project, so the basis for studying the development process is the approach to it namely as to investment project, that is, in fact, a systematic approach. The concept of "development project" is a system of goals formulated within its framework, strategically aimed at fulfilling the overall mission, technological processes, technical and organizational documentation, material, financial, labor, intellectual and other resources, as well as management decisions and measures for their implementation [4, 11].

Development is a special process and a special type of professional activity (business) associated with the qualitative transformation of real estate and ensuring an increase in its value [33]. Thus, the key features of development are precisely the qualitative, that is, the fundamental transformation and increase in the value of real estate, including the effectiveness of investments.

On the other hand, development also acts as a system for managing the process of creating and developing real estate, resulting in a change in its physical, economic, legal properties [16]. Thus, the physical processes of development ensure the emergence of new consumer qualities in a real estate object that

correspond to the changing needs of society. These changes can be both cardinal (for example, transformation of an undeveloped plot of land into a cottage village) and not very noticeable externally (for example, change in the intended use of a land plot). But these changes always present and are a necessary sign of development, a necessary condition for increasing the economic effect of using a property.

The economic processes of development are implemented in the form of an increase in the value of the property due to the physical changes made. At the same time, the increase in value is ensured not by any physical transformations, but only by those that meet the requirements of the market and the needs of its consumers. The greater this correspondence, the higher the value of the object being created, the higher the efficiency of development.

Projects related to the development of real estate have their own specifics and distinctive features: high capital intensity and labor intensity of projects, duration of the investment cycle, the unity of the object being created, etc. The main goal of a development project is to generate income from the increase in real estate value. This can be achieved only in the case of combining land, capital, and labor in the process of project implementation, as well as ensuring their interaction, which will give a new quality that allows the object to be realized at a cost higher than necessary to recover costs [4]. Thus, development in the investment and construction complex is a way of organizing investment and construction activities in the entire range of existing modifications and depending on the breadth of coverage of a real estate object' life cycle.

At the same time, many problems of modern development in the systemic plane remain little studied to date. Moreover, tendencies of influence from digital technologies and digital transformation, gentrification, etc. are contradictory, which requires especially thorough research.

2 Materials and Methods

The general approach to research issues is based on an integrated method, which, in turn, combines a series of more differentiated methods and systemic views. First, the study is carried out within the framework of the contextualist paradigm and proceeds from the key premise that settlement systems, the organization of urban spaces and diverse suburban areas are the physical embodiment of wider invisible processes (political, economic, production-technological, cultural) and that there are a kind of "rules for translating" these processes and concepts into some concrete material form. Secondly, the components of the structural method are used in the work - in the process of considering the development functions and their information technology support. Elements of the case study method were also applied.

3 Results and Discussion

Acting as the most important area of real investment, the implementation of development projects is not only a way to increase the wealth of the owner or a source of income for the developer and investors, but also has a real impact on economic processes, budget revenues, and social relations in society. The conditionally positive impact of development on the economy can be boiled down to two aspects: territorial and sectoral.

The territorial aspect of the influence of development implies that the development of real estate leads to a qualitative change not only in the real estate objects themselves, but also in their environment. If at the same time the option of real estate development turns out to be the best possible, then the positive impact of development on the improvement of the surrounding territories is maximum and contributes to the maximum increase in their value [2, 3]. The sectoral (macroeconomic) aspect of the positive impact of construction development on economic

development is determined by the high multiplier effect of business activity in the real estate sector.

When determining the functions of a developer, it seems legitimate to implement the approach that correlates them with five main stages in the implementation of real estate development projects [21]: 1) Development of the concept and preliminary review of the project; 2) Location assessment and project feasibility study; 3) Design and evaluation of the project; 4) Contracting and construction; 5) Marketing, management, and disposal of results.

At the same time, at each stage of the implementation of real estate projects, the developer acts as a key figure, initiating the development process, making economically sound, most effective decisions at each stage of the project, taking into account the needs of the market and the interests of all development participants [5-9]. The significance of the developer for the implementation of the real estate development process is determined by the fact that, while ensuring coordination between all participants in the development, he is responsible to direct investors for the effective management of their funds, to banks - for the return of credit resources, to government agencies that authorize the implementation of the project - for its quality, to contractors for timely financing of work, to consumers for the operation of the facility.

The main feature that distinguishes the developer from other participants in the real estate development process is creativity, pronounced entrepreneurial qualities that make him an independent factor which makes a personal contribution to increasing the value of the property [13, 14]. To a greater extent, the activity of a developer fits the definition of entrepreneurship formulated by J. Schumpeter, P. Drucker, and others, the essence of which is associated with innovation and creativity.

As a special type of professional activity, development includes full-fledged consulting in the broadest sense of the word and a real estate project management system, including the material creation of real estate objects.

The overall essence of development is the management of investment project in the field of real estate, which involves:

- Selection of cost-effective project;
- Identification and mitigation of risks associated with the project;
- Obtaining from the authorities the necessary permits for the implementation of the project;
- Determination of conditions for attracting investments, working out mechanisms and forms of their return;
- Search and attraction of investors;
- Selection of contractors, financing and control of their work;
- Sale of a real estate object or transfer to operation.

The main purpose of development is to generate income (profit) by creating objects (including improving the quality characteristics of land plots) that satisfy the needs of the purchasers of this property (buyers, tenants) to the maximum extent possible. However, in this case, it is not just about construction, but about a commercial project, which implies not only the creation of an object, but also making a profit from its use or sale.

Most of the current development companies are trying to remain at the same time the main contractors on the objects they create. Unfortunately, as a result, they often put the issues of construction organization in the foreground, leaving market problems in the background, forgetting that construction is not an end in itself [17, 18]. The goal is to generate income from the sale of the created object on the market, and this requires a study of demand, the choice of projects focused on a certain segment of consumers, an active policy to promote the project to the market, and much more. This comes from the wrong statement of the problem, instead of realizing the need to implement "what

we are building"; the question should be posed like this: "we need to build what can be sold" [21].

The experience of implementing land development projects shows that for large of them, it is advisable to create a specialized management company dealing exclusively with this project or several similar projects [12]. Attempts to implement a land development project within the framework of the main organizational structure of a development company, as a rule, give very inefficient results [49]. Thus, in order to manage a project for the integrated development of large land plots, it is necessary to create a separate legal entity responsible to the main developer organization for the results of the project.

It can be assumed that development is a direction in which other profitable lines of business transfer a significant part of their income, and the wide availability of borrowed funds, the development of the mechanism for their involvement in circulation and the variety of financial instruments create a favorable environment for the development and functioning of the development itself [28-31]. At the same time, development, like other types of entrepreneurial activity, depends on the investment climate in the region and on the culture of service in the country.

It should be noted that from the point of view of project management, the most preferable classification is the one that distinguishes the following types of projects:

- Terminal project (single project): it has an ultimate goal and limited content;
- Evolving project (a group of projects formed from an initiated one): it does not have a terminal, unambiguous goal, is limited in content, but not limited in time;
- Multi-project (a group of projects linked by resources): the presence of clear goals at the time of initiation of each project, unlimited content due to the many projects simultaneously implemented on an ongoing basis, unlimited in time;
- Program (a group of projects united by a common goal and conditions for implementation): the goal is limited in time, the content is limited, all projects in the program are interconnected;
- Open project (group of projects): it does not have an ultimate, terminal goal and is not limited in content;

Accordingly, each of the selected types of projects involves a special type of management:

- Management of terminal projects (strategic management, management by objectives);
- Developing project management (sliding management, project product configuration management);
- Multi-project management (strategic management, management of harmonization of goals and resources); program-target management (strategic management, project performance management);
- Management of open projects (sliding management, project content management).

Classifications of projects and types of their management make it possible to carry out decomposition, identify features, synthesize, and model the object of investment. As a result, the actions of the participants must be coordinated, resources must be optimized, the interests of the participants harmonized and the necessary quality ensured, which arises through the achievement of a synergistic effect of the complex of all management actions. This is the essence of project management.

It is known that each project has a life cycle, which is a model of its development in time, that determines the various situations in the process of its implementation. The project life cycle is a set of successive phases identified by project participants to control and manage the process of intensive transformation [22, 25]. The project life cycle model is a real project management tool that can be used to take into account the strategic aspects of the project and the organization as a whole, allocate resources,

manage risks. The project life cycle model should have both general properties that are characteristic of any type of project, and specific properties that are unique to this particular project. Such a combination of common typical characteristics and specific features is one of the basic principles of project management in development.

At the same time, there are fundamental differences in the life cycles of various types of projects, which is reflected in the functions and methods of managing them. So, the classical understanding of the life cycle as a period of time from the beginning to the end of the project is applicable to the terminal project [26]. In an evolving project, the project life cycle is combined with the product life cycle. The life cycle of an open project is open, the temporal structure of this cycle has a wave character, fundamentally unlimited in time, all the functions of managing such a project are based on a sliding principle. Multi-project management implies unlimited content and, therefore, has a constantly renewable life cycle.

Each project is an object of investment. Therefore, there is no need to single out a special group of investment projects. However, it is advisable to divide the life cycle of the project into three semantic phases: pre-investment, investment, and operational. Such a decomposition is convenient for making managerial decisions regarding project financing (allocation of resources).

The objective requirements of the territory development technology - development within territory planning - determine the discrepancy between the limited capabilities of developers and the scale of the tasks of developing cities and territories. The development of the territory is ensured by the construction "inside the territory" - on a land plot within the boundaries of a quarter, microdistrict, and "outside the territory" - this is the construction of "off-site" facilities and engineering networks. The possibilities of private developers are not enough to solve the problems of the development of the city as a whole [34-36]. Private developers master (develop) parts of the city - quarters, neighborhoods. The transition to the next level of the scale of activity - a district, a group of districts - means a transition to activities that private developers are usually unable to carry out, or they are not interested in this for objective reasons related to the laws of business.

This is the conflict between the limits of the economic possibilities of private developers and the development needs of the city as a whole that exceed them. However, this collision is resolvable with the application of certain technology.

Along with private developers, another entity should appear that is interested and ready to do what, as a rule, private developers do not do, namely, to build backbone networks and generating facilities of engineering and technical infrastructure. Public authorities can become such a subject. In the interaction of private developers and public authorities, the technology of partnership is born as a synchronization of the implementation of various (at least two) interrelated projects [38-42]. To solve this problem, a methodology for organizing a public-private partnership (PPP) is widely used.

At each stage of the life cycle of a construction object, traditional approaches are integrated with new technologies, approaches to work performance and project management are adjusted [27]. Given the specifics of the industry and the presence of a large number of regulatory factors, the digitalization of the construction and real estate sectors does not occur as quickly as in digital companies. Nevertheless, it should be recognized that digital technologies are becoming a new reality in the construction industry, and its future depends on how quickly the industry and its participants adapt to this new reality [10]. In particular, the latest information technologies can play a key role in the modern innovative development in construction. The functionality of Big Data will allow numerous subjects of an investment and construction project to analyze large amounts of various information in a short time, calculate

potential risks, model the process of making managerial decisions and predict their effectiveness.

Standardization of processes and effective application of information modeling technologies in the design of capital construction projects sets the vector of information modeling at subsequent stages of the life cycle of a real estate object, determines the success of investment and construction projects in general [44, 46-48]. From this, it follows that the issue of the quality of implementation of information modeling technologies in companies engaged in architectural and construction design of capital construction objects becomes decisive in the technological chain "design-construction-operation".

One of the key problems in 2D modeling is the loss of information. Moreover, the amount of lost information tends to accumulate from stage to stage of the object's life cycle. Linking information from different disciplines in the design, construction, and operation of a facility can be a complex process with non-obvious methods of solution. It requires the connection and systematization of existing information structures that use software from different manufacturers. Meanwhile, the systematization and elimination of barriers in the transfer of information is the key to improving the efficiency of managing a capital construction project.

The use of information modeling technologies is not just a fashionable trend - it is a real economic need, due to the necessity to ensure the efficient operation of the investment and construction industry.

Information modeling technologies are an innovative approach to the design-build-operate cycle. The development of an information model makes it possible to increase both the speed and economic efficiency of creating complex objects that do not violate the ecological balance [51-55]. Solutions based on information modeling technologies provide cost estimates, 4D visualization of construction processes, collision detection, information exchange with customers, as well as planning and optimization of construction processes, which leads to a reduction in material costs, increased productivity and cost savings at all stages of the capital construction object life cycle.

The main advantages of using information modeling technologies at the stage of architectural and construction design are the following:

- The ability to take into account the features of the existing infrastructure of adjacent territories when planning the location of capital construction facilities;
- The ability to take into account the features of the terrain and soil characteristics when designing engineering networks;
- The possibility of planning the transport network in the development area, taking into account changes in the transport situation of the adjacent territories;
- The ability to determine the optimal amount of resources required for the implementation of construction work;
- Determination of the optimal ways of delivery of materials, which allows minimizing the time and cost of deliveries.

In the process of functioning of the industry ecosystem, digital interaction is carried out as a digital form of organizing interactions between industry suppliers and consumers in order to minimize transaction costs (for example, when searching for partners, goods, services, arranging payments, concluding contracts, monitoring the implementation of agreements, etc., provided by a special platform) [23]. As part of the functioning of the digital ecosystem of the construction industry, the digital interaction of participants in investment construction projects should move to a new, digital level provided by the cloud information-design environment.

It is noteworthy that Big Data in construction includes not only data on the direct construction of facilities, but also on everything related to operation, energy supply, subsequent repairs and reconstruction, real estate services, etc. Taking into

account the share of spending on housing by individuals and commercial real estate by organizations, the costs associated directly or indirectly with construction show that among all Big Data, namely those in construction are the largest.

Evidently, various participants in the design, construction, and operation of the facility need different data to achieve the goals of their activities [56-59]. Taking into account the opacity of construction in general, the subjects of construction activity can interpret and distort them based in their own economic interests. Thus, appropriate solutions are needed.

In the general case, the basic process for generating data in construction is the process of designing a construction object. At present, the BIM-technology is being introduced into practice - its purpose is to give all graphic elements of the object model specific attributes with the aim of their subsequent use in the formation of estimates. BIM technology does not solve any other strategic tasks regarding the design process. All organizational relationships have been preserved since the days of drawing boards with drawings on paper. Thus, in fact, the development of CAD in construction over the past three decades is based on solving the problem of simplifying cost estimates in order to create various databases [60-62]. However, this technology creates a contradiction that does not allow generating data that can be classified as Big Data, and at the same time not solving any problems directly for the purposes of the design itself. The designer is paid for the development of sections of the construction project after the issuance of working documentation in a timely manner. BIM technology implies object modeling (which is not equivalent to the development of working documentation), that forces additional investments in software and personnel. At the same time, the use of BIM technology increases the time and cost of design. The financial result of the designer's activity is determined by the speed and quality of working documentation transferred to the construction, and not by the quality of modeling and preparation of databases. In other words, the designer is forced to invest additionally and carry out activities on the results of which other structures earn. This contradiction explains the reason for such a complex, long and largely unsuccessful introduction of BIM technologies into construction practice [23, 37, 49]. In different countries, overcoming this contradiction is carried out in various ways at the national level. All of them actually involve forcing the designer by administrative and economic methods to perform work that is useless for him.

If an attempt to introduce new technologies with appropriate applied tools into the practice of building design in various countries for decades has not everywhere led to the desired result, then there is a common fundamental reason. Construction is one of the most 'conservative' sectors of the economy, which was formed under the influence of a combination of limiting factors, in particular, the existence of building codes and the regulation of activities at the local and national level. Construction is a local industry, and it is not possible to import construction objects (such as engineering products) to increase competition, which leads to the formation of local engineering traditions and relationships that develop over generations [64-67]. It can also be assumed that the above factors lead to the situation when people who are employed in construction can be conditionally classified as traditionalists and conservatives. At a minimum, the professional growth of builders always occurs in the absence or insignificance of changes in the technological order. As a result of the influence of all factors, the construction industry is not very receptive to innovations. It is obvious that the existing BIM-technologies through the software presented on the market conceptually contradict the nature of relationships in construction, therefore, in order to obtain the appropriate Big Data, a fundamentally different approach is needed that would take into account industry specifics.

Combining Big Data with building information modeling (BIM) opens up other possibilities. Adding Big Data to 3D or 4D designs makes it easy for engineers to spot any error or make an accurate prediction. One of the advantages of BIM is the ability

to ensure collaboration of specialists from different countries on a model in real time. Using Big Data, they will be able to quickly transfer huge amounts of information to each other in order to make decisions faster. This fundamentally changes the approach to project management. Previously, all the data was owned by one person or several employees sitting in the same office. Today, true teamwork is possible, with the designer, developer, and general contractor, who may be located in different countries, together making changes to the project at an early stage. Thus, the development project becomes a truly aggregated system [45].

It is also noteworthy that Big Data can also contribute to a competent assessment of a construction project within the ecosystem of the territory, taking into account all social and economic implications - this is possible, in particular, based on aggregating data on the effects of gentrification, with the subsequent integration of AI and machine learning into the development of an appropriate construction project.

It should be noted that over the past 40-50 years, two trends have become established in the development of urban areas. They appeared to be especially relevant since the 1990s. First of all, it is about deindustrialization (the withdrawal of industrial facilities outside the city, followed by the reorientation of the vacated areas for the construction of residential and commercial real estate) and gentrification (increasing the value of real estate by transforming and regenerating the living environment around and inside buildings). Despite the ambiguity of the political assessments of the above processes, considered as the result of the development of neoliberalism within the framework of the post-industrial capitalist system, it is nevertheless possible to single out a stable content that determines the nature of the interaction of stakeholders in the process of making key decisions on the socio-economic development of the territory [45, 50, 63].

One of the consequences of the cities deindustrialization is a sharp reduction in jobs and the workers themselves, a depressed state of the economy, unemployment, and a drop in real investment. At the same time, while in large ("global") cities that have effectively adapted to the new conditions of economic development, it was possible to partially or completely compensate for the negative consequences of deindustrialization through trade, tourism, and financial services, in old industrial centers dependent on one industry (such as Lyon, Manchester, Sheffield, Essen, Detroit) or enterprises (single towns), the picture is not so 'rosy'.

Under these conditions, in the process of making economic decisions, it is necessary to take into account the totality of available and accessible resources at the city level, the most valuable of which are buildings and land. The process of gentrification of urban areas included the following stages.

First stage. In the early 1960s, a number of architects, with the support of the state and city authorities, developed projects related to the resettlement of areas characterized by a low standard of living and high crime in the absence of minimal amenities for residents [24]. It was, first of all, about the so-called ghettos (places of compact residence of racial and national minorities), depressive territories with an unfavorable economic and environmental situation in houses of mass settlement (factory dormitories or entire villages at industrial facilities). The consequence of these initiatives was the relocation of the inhabitants of the above-mentioned areas to more comfortable conditions, but with the simultaneous loss of pedestrian accessibility of the workplace and the growth of the outskirts and suburbs of large and medium-sized cities [32]. In parallel, there was an active redevelopment and restructuring of the central districts of the city, accompanied by an increase in the cost of housing and rent. As a result, some of the local residents were also forced to move to the periphery, however not for social, but for economic reasons, which, of course, could not but cause discontent on their part [32].

The second stage of increasing the value of real estate was the movement of “squatters” and “lofters” in the late 1970s. The essence of this phenomenon is the seizure or rent for a nominal fee of premises empty for one reason or another (apartments, houses, or entire neighborhoods) with the subsequent capitalization of cultural and social assets formed by their inhabitants. Indeed, due to the redevelopment of quarters, the massive outflow of residents (due to natural disasters, the economic crisis), the incompleteness of the process of primary gentrification described above, empty buildings and premises were quickly populated by the so-called “bohemian” - artists, creative youth, who, in addition to actually living organized workshops, art galleries, nightclubs, art supply stores, offices of small businesses. Subsequently, the places of “capture” formed their own “aura”, an image that promoted the growth of real estate prices in the surrounding neighborhoods. The fate of the seized premises in this case was twofold: either the displacement of the creative element through an increase in rental rates (up to forced eviction), or the institutionalization of spaces with giving them an official status. Such processes were actively taking place in Chicago, New York, Amsterdam, East Berlin, Paris, and, since the late 1980s, in the cities of the former USSR [43].

Third stage. Since the early 1980s, as a result of the deindustrialization of the urban economy described above, gentrification has also covered partially vacated industrial areas. Thus, enterprises rented out part of the space due to incomplete utilization of production capacities to small and medium-sized enterprises, and subsequently to non-core tenants. In some cases, production workshops were converted into residential premises and offices (for example, by dividing the space into several levels) while maintaining the production aesthetics, which became a separate direction in interior design (bare brickwork, elements of industrial equipment in the decor, metal structures with rivets, etc.). Despite the functional limitation and low transport accessibility of such premises, the cost of renting an office or a loft-style apartment in the area of the port or industrial development was 4-5 times higher than the average prices in the city [68]. Thus, the city authorities got the opportunity to mitigate and partially compensate for the consequences of the fall in the level of industrial development for the budget, considering, nevertheless, this process as a temporary and compromise measure.

The fourth stage was characterized by a change in the scale of this process of redevelopment of industrial zones since the late 1980s. Entire districts of the city with enterprises located on them fall under the demolition, rehabilitation, restructuring, or re-profiling of buildings. The main asset for the city authorities is the land under the factories and plants, the cost of which in the city center is very high. In some cases, it is possible to preserve buildings and structures, provided they meet the requirements of the developer or builder and the possibility of regenerating the surrounding space. In other words, if a former industrial building adds value to the area's new properties, it will be preserved. Otherwise, the destruction of the structure inevitably follows, often without regard to the historical and cultural value of the architectural structure. This phenomenon was actively supported by the authorities at the national and city levels within the framework of the “new industrial policy”, the essence of which was the withdrawal of enterprises from the city and the formation of modern high-tech industries within the framework of sectoral industrial clusters. At the same time, the presence of industrial facilities in the city center is considered as a factor constraining investment activity [43].

The fifth stage of gentrification in developed countries is associated with the reorientation, since the early 1990s, of entire industrial cities and regions as part of the strategy of internationalizing the economy and deepening the international division of labor, in which large industrial enterprises oriented to the local or regional market give way to network production systems, based on a flexible response to market needs, the cost of renting land and premises, and the availability of labor [15]. At the same time, the enterprise is able to quickly change the scale of its activities (from a set of small enterprises to large

industrial formations), location and tax residence. Thus, in conditions of mobility and variability (agility) of the production environment, the intangible component of the economy is becoming increasingly important for cities and regions. At the same time, the old industrial infrastructure becomes an integral part of the “image” of the territory, contributing to the formation of a “brand” to attract tourists, residents, labor, and entrepreneurs [11]. In other words, the effective development of the production specifics of the territory through the ‘mastering’ of the heritage of the industrial era can become the basis for the successful economic development of cities and regions in the context of globalization [19]. London, Sheffield, Rotterdam, Essen are often cited as successful examples of the implementation of a “brand” strategy at the city level – these are cities that have successfully applied the principles of converting the industrial past into an attractive image of the present and future for investors.

When considering modern gentrification, the cultural dimension of the described processes deserves special mention; in the name of these processes, the phrases “creative industries”, “creative clusters”, “rebirth through culture” (culture-led regeneration) are increasingly used, deriving from the general concept of “creative city” or “creative quarter”. This aspect of the phenomena under consideration prevails in urban development in modern conditions. A number of countries have established specialized departments at the national and city levels. An example is the UK, where the Department of environment, transport, and the regions operates, as well as a number of government initiatives to revive the former industrial cities that have fallen into decay (Urban task force) [15]. Another example is Spain, where “rebirth through culture” projects were implemented by appropriate institutions in Bilbao and Barcelona. Also, the USA should be mentioned (Portland, New Orleans) [16]. The unifying feature of cultural initiatives within the framework of gentrification is the desire to diversify the socio-cultural development of the territory and, in the framework of interaction with the owners of land and buildings, authorities, and local communities, to solve a number of systemic problems associated with the decline in the industrial potential of the territory.

Similar examples of “gentrification through culture” can be “found in many cities around the world, and such initiatives cannot but be recognized as effective, as they become centers of attraction for further development projects, creating a positive, well-recognized image of the place, which attracts investors and the right layer of potential clients” [19]. At the same time, the development of industrial zones in itself (even without a significant economic effect) can become an important component of the image of a city or territory. Most developers consider the development of creative clusters as an important element in the further promotion of the used site.

An important component of development in the United States are public initiatives in urban development and the cooperation of government authorities with companies operating in the real estate industry.

Moreover, let us look at some successful worldwide cases below.

Zurich, Switzerland. The multifunctional complex, located next to a major railway junction, not far from the city's main station, includes 5 buildings with offices, exhibition and concert halls, underground parking, restaurants and shops. Two buildings are five-story, two are seven-story, and the high-rise dominant is the 36-story Prime Tower building. It was built in 2011 by Swiss architects Annette Gigon and Mike Guyer Architekten. This is a business center with service rooms, bars and restaurants on the ground and top floors. Renting mainly comes from the upscale service sector. The environmental benefits of a building are made up of a number of factors. Firstly, the building is in the zone of large-scale renovation. Directly on the site, there used to be a mechanical plant for the production of gears. Secondly, several innovations were used in the building itself - in particular, the use of natural ventilation with the help of kinetic window systems that open parallel to the facade contributes to

energy saving. The process is controlled and monitored automatically. In addition to natural ventilation, the building also uses mechanical ventilation, which is built into the floor structure. Both of them are combined with a “chiller-fancoil” system, which uses heat pumps to heat the air in winter and cool it in summer. The building has repeatedly received awards for its high energy efficiency. The most valuable ones are the LEED gold certificate, the Green Property gold quality mark, as well as the certificate of the Minergie national system of “green” standards. To create a positive social climate, the designers proposed to improve the quality of the internal environment. The roofs of the stylobate part of the complex are landscaped, and the engineering and design solution of the atrium with a skylight made it possible to create spaces equal in terms of the amount of light for comfortable work. As for the economic side of the project, the profitability of the complex is justified by the rational use of the site, high building density as a result of choosing a high-rise solution and the development of underground space, an optimized composition of zones and premises in terms of the ratio of functions, as well as reducing the cost of electricity supply to a minimum.

Vienna, Austria. As a rule, along the railway tracks public and industrial buildings are erected, which is explained by sanitary and hygienic restrictions that do not allow the creation of residential buildings and recreational areas. However, in the dense buildings of European cities, exceptions to the rule are quite common. So, for example, it happened in the Donaustadt district of the Austrian capital. Being for a long time in isolation from the central districts of the city, this territory received a convenient and high-quality connection with them after the construction of an overpass line of modern high-speed rail transport. As a result, the area has become more attractive to citizens. Thus, the gentrification of the territory made it possible to achieve a good social effect: the area received a new impetus for development. In the wake of the increased interest of the population in living in this place in 2012, a 7-storey residential building was built here according to the project of the Artec Architekten workshop, the comfort of which allows people of different generations to live in it. It is located at a distance of only 8-12 m from the railway overpass, that is, almost right next to it. The proximity of this negative impact factor was taken into account by the designers, who were able to neutralize its impact with the help of a number of architectural, urban planning, and engineering design solutions. The main features of this apartment building, which reduce environmental risks, are the elongated shape, well-thought-out functional organization and the configuration of the northern facade made of perforated metal. The building is a noise barrier for the yard, and the sawtooth-shaped facade overlooking the railway makes it possible to illuminate the vertical winter garden, which runs to the entire height of the building, with diffused overhead light, and reduce noise from the railway in it, as well as in apartments. It should be noted that the facades of the building have improved thermal performance, which meet the standard of a “passive” house. In addition, the roof of the building has been landscaped, and each apartment has large balconies facing south. In cramped urban planning conditions, this partially compensates for the impossibility of creating a full-fledged landscaped public space in the local area. Photovoltaic panels installed on the roof help to reduce energy consumption and increase the economic efficiency of the building. Other engineering and design measures also serve the purposes of resource saving: a rainwater collection system for watering plants and a thermally active foundation used for space heating during the cold season.

Basel, Switzerland. In 2013-2018, a 22-storey multifunctional building Grosspeter Tower was built directly next to the railway tracks, separated from them only by a highway. The building is located within walking distance of the Bahnhof Basel SBB train station and includes offices, a conference room, and a hotel. During the design, construction, and operation of this facility by the architects of the Swiss bureau Burckhardt + Partner AG, various bio-positive technologies were provided to improve environmental friendliness. Most of them are related to the reduction of energy consumption. For example, the heating and

cooling of the building is provided by a system of geothermal probes. One of the unique innovations was the facade system, in which the share of glazing is minimized. Its design helps to reduce heat loss and achieve optimal light conditions in the premises. The photovoltaic film integrated into it turned the building into a real power plant. The air is heated by means of facade duct convectors, and its ventilation and cooling is carried out through the “ceiling sails”. The indoor air maintains a balance of carbon dioxide. There are bike paths in the surrounding area, which may encourage citizens to use an environmentally friendly form of transport - bicycles. These and other engineering and architectural decisions have become the reason for applying for a certificate under the LEED system. The social tasks solved in the project, first of all, concerned the creation of a comfortable environment in accordance with the principles of universal design. The entrances to the building are located on the same level with the ground level, there are no thresholds in the doorways, the dimensions of the elevator cabins, sanitary facilities and parking spaces are sufficient for use by people with disabilities. The compact floor plan and multi-level underground parking ensured sustainable use of urban land and improved energy efficiency during operation. Thanks to them, as well as due high-quality structures and equipment, it is possible to declare the cost-effectiveness of the building throughout the entire life cycle.

Portland, USA. The introduction of sustainable technologies has been characteristic of Portland for a long time. The main feature of the city policy in the design and construction of all municipal facilities is the obligatory adherence to the principles of sustainable development and the receipt by buildings of LEED certificates not lower than Gold. The low-rise office building “Columbia-Building” was built in 2013-2015 as part of a project to renovate a wastewater treatment plant built in 1952 in an industrial area of the city. The site is surrounded on three sides by railroad tracks, and on the fourth side - by a channel of the Columbia River. Here, the architects of the Skylab Architecture studio used an original approach. The space-planning solution of the building takes into account the surrounding landscape and the industrial history of the place. One of the important engineering and structural elements that contributes to the improvement of environmental conditions has become a water treatment system that allows discharging neutralized rainwater into the river from the roof of the building, as well as from the site, including from the surface of open car parks. Roofs also participate in this scheme as filters and flow regulators: they are landscaped with local floodplain and swampy plants. The economic effect is mainly associated with energy saving measures. The configuration of the building and the lighting system are adapted to the cardinal points and the movement of the sun. Ceiling light allows minimizing electricity consumption and improving the environment of indoor workspaces. In order to avoid overheating and to reduce noise from the nearby railway, the building was sunk into the embankment by more than 2 meters. Stainless steel facade blinds also protect against excess solar radiation. A heat recovery system and photovoltaic panels have reduced the consumption of energy supplied by the local thermal power plant. The problem of strengthening social efficiency was solved in an original way: the building is intended not only for the work of the engineering and technical staff of the station, but also for holding various cultural events. The interests of local authorities and environmental organizations interested in greening the city and popularizing sustainable development methods converged here. The opening of the industrial and utility-storage areas to the public made it possible to show the vital elements of the infrastructure. This became possible as a result of improving the safety of the site after the reorganization of the road network - the transfer of the highway and the placement of open public space in its place. On the territory of the facility, there are information and educational stands about the rich flora and fauna of the lake system of the Columbia River floodplain, about the environment, its evolution and methods of protection.

All these solutions and their implementation became possible thanks to the development of building projects as a composite

aggregated system, within the framework of contextualism as a paradigm which states that development and behavior are realized in some specific sum of external contexts - physical, historical and socio-cultural - and are determined by the interaction of factors of this total context.

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SOCIAL POLICY DEVELOPMENT IN THE CONDITIONS OF DIGITAL TRANSFORMATION OF SOCIETY

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Abstract: The article shows that digitalization has changed every sphere of human life and reformed the social order in society, but at the same time, this process has contradictory consequences - digital inequality, an increase in the share of a new social class of the precariat, deprived of most social guarantees within the traditional institutional structure of state social policy. The purpose of the article is to comprehensively study the role of social policy in the process of digital transformation of society in Western countries and to identify, on this basis, the general and specific patterns of formation and implementation of social policy, changes in the political approaches of the state to the development of the social sphere, including in the context of globalization processes.

Keywords: social policy; digital divide; precariat; SDG.

1 Introduction

Today, digital technologies and network effects represent an integral part of the socio-economic, political, and cultural life of all subjects of the world economic system and the basis of social progress in general. Most countries of the world are on the verge of another technological revolution, the emergence of a new civilization, which is characterized by the key role of knowledge, science, technology, and information in all spheres of life.

The relevance of the research topic is determined by the need to conduct a deep multifaceted analysis of the changes that occurred at the beginning of the 21st century in the socio-political development of Western countries, and, on this basis, to identify patterns and features of the formation and implementation of social transformation policies. The systematization and generalization of this experience in the context of the formation and functioning of modern systems and mechanisms of well-being is a very important problem in scientific and practical terms. In this regard, it seems relevant to study a set of issues related to the impact of social policy in Western countries on the transformation of society and the living conditions of the population and, conversely, an adequate perception of the impulses coming from these factors on the part of the relevant political institutions. This equally applies to the issue of effective structuring and prioritization of social policy.

At one time, Western countries faced difficult problems of "systemic transition", which required the mobilization of the moral and intellectual efforts of society to overcome the traditional worldview and develop a political and socio-economic strategy based on the principles of consensus and ensuring social guarantees. Its supporters proceeded from the importance of solving the problem of positive social reform on the basis of abandoning the policy of low wages. It was believed that a policy leading to an increase in the share of wage labor in the national income provides an increase in total welfare as a result of increased motivation and productivity.

Formed in the conditions of the establishment of an industrial society, this strategy was developed with the transition to a post-industrial system and information society. The main factor of competitiveness is highly skilled labor associated with intellectual activity in various fields. Under these conditions, the

role of social policy has increased, caused by the need to solve acute social problems and create effective conditions for the development of human potential. Nevertheless, the system of positive relationship between scientific and technological revolution and social policy at the present stage of Western society' development is under growing pressure from new factors.

It is necessary to be aware that social policy is a tool for the strategic implementation of a particular welfare model by the state and society. This is an integral element of any civilization, regardless of the level of its socio-economic and scientific and technological development. In terms of both philosophy and political economy, the emergence of civilization, the state naturally predetermines the emergence of elements of social policy, without which the social structure cannot exist. Another thing is the degree of civility of social policy as a component of the constructive development of society. The elements of such a policy are objectively formed at a certain historical phase. From a rigid social model, society is gradually moving to a developing social policy, and as a result, it is gradually transforming towards social openness and becoming in many ways different, socially mobile.

At the same time, it is evolving towards universal recognition and dissemination of the natural values of human development: justice, equality, the rule of law, democracy, and social solidarity. Accordingly, social policy is gradually becoming one of the most important institutions in this system of values, actively influencing social progress and the growth of well-being. As a result, a more just, motivating and balanced social model is being formed, based on the effective differentiation of income and property.

In this regard, it is of great interest to study both the conceptual foundations and principles on which modern social policy is built in the industrialized countries of the West, and its main directions related to ensuring the living conditions of various groups of the population [1-6]. Conducting such research at the current stage of social development is especially important, since the current period is characterized by paradigmatic transformations of regulatory institutions, production, the labor market, and other areas, which is inevitably reflected in changes in the principles of social policy. Due to the fact of evidently diverse 'landscape' of digital society in developed and developing countries, as well as the presence of significant regional differences and peculiarities, the analysis is based mainly on the data for the countries of 'global West', to show the overall 'locomotive' trends.

2 Materials and Methods

The article is inherent in a comprehensive methodology in the study of the above mentioned problems, which made it possible to significantly expand and deepen the analysis of the most significant, basic aspects of the social development of Western countries in conjunction with the policies of state and other institutions [7, 11]. This is due to the universality and diversity of the social policy phenomenon, constantly synthesizing impulses emanating from various aspects of social life, economic development, the relationship of social groups, external factors, and one way or another reacting to them.

In order to obtain more substantiated results, a combination of approaches was used. First of all, it is about traditional, fundamental methods that have received wide recognition in political and social science, namely: dialectical, sociological, analytical and structural-functional methods, along with civilizational and comparative ones.

3 Results and Discussion

In the scientific literature, there are several ideas about social policy. With some differences, there are basically two interpretations. This is, first of all, the idea of social policy as a narrow sphere of responsibility of state institutions, corporations, and trade unions, when social policy is limited mainly to the social security system. It took shape in the 19th and 20th centuries, when industrial countries were going through a phase of primary formation of appropriate mechanisms for providing partial social guarantees to certain categories of wage labor, and then largely preserved after the Second World War during the creation of already "universal" institutions, the socio-political responsibility of which is in this area covered all strata of society [46].

This position is widespread even now due to the fact that the policy of the state on social security issues plays a large role in modern society (policy in the field of pensions, health care, welfare, and poverty alleviation). At the same time, this perception may be strengthened due to the fact that at the end of the 20th - beginning of the 21st century, a partial transformation of this system began in Western countries [13, 14]. The main goal is to move to a new policy adapted to the changed internal and external development conditions - shifts in the socio-demographic structure of the population, the characteristics of the information society, and the challenges of globalization.

Along with this, a broad interpretation of social policy has become widespread, the space of "responsibility" of which, in addition to social security, includes other important branches of social services. It finds manifestation, among other things, in the active and passive policy of the state in the field of employment, the policy of the state and corporations in the field of income, in the field of education, etc. This concept was formulated by such prominent Western scientists as T. Marshall and P. Townsend. With some difference in wording, both of them define social policy as a policy associated with state management of the welfare system (P. Townsend), the provision by the government of a direct impact on the welfare of citizens by providing them with services or income (T. Marshall) [42]. A largely similar point of view on social policy was shared by a major authority in this field, the English scientist R. Titmuss.

It should be borne in mind that over the past 20-25 years, social policy models have been 'tested for strength' in connection with current and future social problems, in particular, changes in the demographic structure of the population and the impact of globalization [17, 20-24]. These challenges are very serious, and the fate of the social model and socio-political values inherited from the 20th century largely depends on how a particular society will be able to successfully resist them. At the same time, there is a danger that particular restructuring of the existing system and existing mechanisms of social policy in the face of pressure from new structural factors may lead to a decrease in the level of social guarantees in Western countries. Another aspect of the problem is also very important – geopolitical one, connected both with the competition of states, economies, and TNCs, and with their influence on the nature of social development and politics at the global and regional level.

In other words, consideration of the problems of social policy in Western countries in the context of the historical sequence of development and the contradictory reality of the modern world, as well as at the landscape of traditional problems and new challenges, seems to be very relevant, because it is necessary to summarize the accumulated experience and identify promising trends in the development of both Western and world civilization as a whole in the coming century.

In addition, political practice, namely political programs and actions, not only reflect the various processes of the life of society, but also synthesize the derivatives of these processes, expressed in political struggle [26-29]. The point is that society evaluates the activities of state power and administration structures through the institutions of public opinion, and most importantly through the mechanisms of democratic elections,

which are based on the competition of socio-political concepts and programs. Moreover, the subjects of this process are forced to prove the high efficiency of their political positions on issues of welfare and social development.

In this regard, it should be taken into account that in Western countries, achievements in the field of socio-economic development in the second half of the 20th - early 21st centuries are associated not so much with the functioning of market economy institutions but rather with the transformation of state institutions. And in recent decades, despite the contradictoriness of trends in socio-political development, increased criticism of the "big state" by supporters of the liberal concept, the ongoing restructuring of social institutions, the role of the factor of political management of various spheres of society's life has actually increased [30-32]. It is also necessary to note the specifics of the current stage in the global context, which consists in the active development of competition of socio-political models at the intercorporate and interstate levels.

A number of authors proceed from the fact that political institutions are called upon to play a fundamental role related to ensuring dynamic social balance in a broad sense (including the economic aspect). If they provide these functions, then the social reforms and other transformations initiated by them become productive. Otherwise, if this rule is not observed, then the society runs the risk of facing the threat of crisis shocks of a socio-economic and political nature, incurs significant social and economic costs, loses precious historical time, and thereby complicates the solution of current and strategic problems in connection with political and competitive basis of modern civilization [8]. In turn, this initiates a process of changing the political paradigm.

Social policy in Western countries plays a key role in the development of modern society, being a condition for its political stability, socio-economic efficiency, and international competitiveness. At the same time, the transformation of social policy in developed countries does not at all mean that the "norms" achieved by society in various areas are called into question [18].

The main strategic task of social policy is to maintain a state of dynamic social equilibrium through the systems and mechanisms of state institutions, while all its other functions are subordinated to the solution of this particular problem. Such a balance in modern Western society, depending on the nature of the social model, can be achieved on the basis of a greater or lesser role of the state, more or less "liberal" social policy, but within the range of social policy effectiveness.

The current model of social policy is not keeping up with the processes of transformation in society and, moreover, is not adequate to the coming changes. It was formed in conditions when the model of development based on other technologies dominated in society [33-37]. The social policy of the second half of the 20th century was designed to solve the problems generated by the industrial society of mass production and consumption. In fact, it remains such to this day. The system corresponds to the employment model, which is characterized by a large number of jobs for all categories of workers. This system is distinguished by a high and stable level of wages. But the transformation has made employment precarious, less routine, and less paid. While earlier social policy was mainly aimed at those who were somehow rejected by the labor market, could not find a job, found themselves among the persons covered by long-term unemployment, in the network society, the target groups of social policy are fundamentally changing. The need for adequate social protection is experienced by those who have a job, due to the fact that it is characterized by an unstable, temporary nature, fixed-term contracts and low wages.

It should be noted that today the complexity of precarious employment is manifested in the variety of its forms and huge scale, which tend to grow. The precariat is also a heterogeneous social stratum, which includes various groups of workers belonging to the category of precarious employment. It can be

argued that precarious employment is a global problem that has a wide range of consequences affecting many areas of society, including those not directly related to the sphere of labor and employment. The consequences of precarious employment, in particular, include the following: increased economic inequality, lack of security and stability, erosion of the self-identity of the individual, changes in social roles within the family, etc.

Dynamism characterizes the growth in the number of representatives of the precariat around the world and the spread of various forms of precarious work. Today, according to various expert estimates, the share of precarious employment ranges from 15 to 40% of the able-bodied population in different countries [16, 19]. A subjectively mediated character is inherent in precarious (unsustainable) employment due to its focus directly on individuals and on meeting the various needs of social groups that form the social stratum of the precariat. Due to the latency of such employment, it is not seriously considered by regulatory authorities, and the development of an appropriate social policy aimed specifically at the precariat is not carried out. Meanwhile, it is critically necessary until a new social class - the precariat - becomes a trigger for serious entropic processes in society.

For a welfare state, the development of a network society is a serious challenge. Political power must seek a response to growing social inequality and the so-called "digital divide". Disproportionate access to information technology resources gives rise to a phenomenon called the 'digital divide'. It is caused by both economic factors and socio-demographic ones. In sociology, it is customary to distinguish three types of it: the first one implies the presence or absence of access to technologies, the second implies differentiation based on the possession of digital competencies, the third indicates unequal opportunities and chances due to difficult or absent access to information technologies and is associated with a new form of inequality - digital inequality [46]. Van Dijk argues that the digital divide is an aspect of social inequality and, as a result, one of the most pressing problems in the development of modern society [60]. Social inequality as a result of the digital divide becomes the basis for the perpetuation of social exclusion. Even among EU countries, there is a fairly obvious degree of digital divide (see Figures 1 and 2 below) [9].

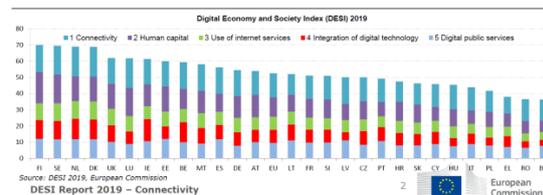


Figure 1. Digital Economy and Society Index within EU countries

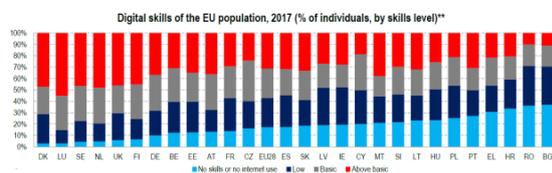


Figure 2. Digital skills of the EU population, 2017 (% of individuals, by skills level)

First of all, the search for a solution to the problem is possible through the development of education, training, and digital literacy. However, this also affects the conceptual foundations on which the welfare state is based. A promising policy in this regard concerns, in particular, taxation and social insurance, which requires a new institutional approach and a look at the role of the main participants in this process - workers, business, and the state [12, p. 6].

The important point is that in Western countries the social state as a whole has fulfilled its epoch-making task. It contributed to the formation of a complex of socio-political institutions that provided society with high stability and are relying on the mass middle class. But the middle class has been undergoing a phase of transformation over the past decades. It must also be taken into account that this is the most mobile and least monolithic part of the social structure [39-41]. The activation of ideological opponents of "big" social policy is largely a reflection of these changes. And this is the problem associated with the reforms, with the transformation of the welfare state. The middle class, in which active differentiating processes are taking place, is not as active and cannot be as active as before in supporting the principles on which social policy was developed in the first post-war decades. To a large extent, this relative passivity is due to the fact that during this time it has formed a significant potential for property and income, and thus acquired relative independence from the social policy of the state.

However, in the digital age, when considering social problems, it is necessary to take into account the development of such a phenomenon as network employment, although it has not yet received significant distribution [44, 45]. But the development of such structures leads to the transformation of traditional social and labor relations, and social policy does not actually affect or only slightly influence this area of activity, depriving those employed there of social support.

It is necessary to take into account the inevitable further growth of social differentiation of incomes in these conditions, and this is a threat to stability. Therefore, to maintain a dynamic social balance, it may be necessary to increase the social spending of the state. At the same time, this is another possible dead end, because due to financial problems, such an increase may not take place as an effective support to citizens, that is, it will not be able to properly fulfill social obligations [47-52, 54]. The possibility of reducing the financing of social spending is a serious problem, which is everywhere generated by global factors, the processes of networking and digitalization of society.

'At gunpoint', there is the current model of the social state and socio-political relations based on the consolidation of interests. A modern developed society throughout the world relies on such consolidation and cannot develop effectively without it, because such is the general structure based on the principle of dynamic balance (socio-economic and political). Otherwise, the loss of balance will generate conflicts of not only low, but also high power. And one of the tasks of the state is to ensure that its social activity does not lag behind the changes. Formally, the goal is to replace the large but "passive" welfare state, whose activities are related to the prevention of poverty and the payment of cash benefits, by an "active" state, more compact, economical, but more effective in terms of social spending and results, aimed at coordinated partnership in solving problems of welfare and development of society [38, 58].

Meanwhile, rigid institutional structures hinder the social progress in developed countries (see Figure 3 below for G7 data).

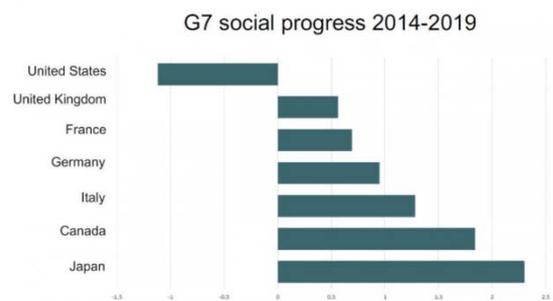


Figure 3. G7 countries social progress, for the period of 2014-2019. [5]

"G7 countries like Germany, France and the UK are sluggish in their improvement ... Rich countries can rightly point out that poorer countries catching up will probably make faster progress towards the SDGs. This is why although some of the big emerging countries, like China, Nigeria, Pakistan and Bangladesh, have improved by around three points on SPI since 2014, they should be doing better" [15].

Meanwhile, in many countries, both poverty and wealth have been on the rise for a long time; inequality is increasing, and social policy is not able to effectively counter it. For example, a visualization exploring racial inequality in delivering the UN Sustainable Development Goals (SDGs) in the US shows that as of 2021 the country failed to deliver a promise on racial equality (see Figure 4). In this situation, the political authorities set an important, but paradoxical and difficult task - to ensure greater involvement of citizens and society in development processes.



Figure 4. The level of achievement SDGs concerning racial equality, across the USA states [10]

In fact, there is a crisis in the management of society, because in the conditions of the global world, networkization and digitalization, the state loses its former efficiency, appears unable to adequately respond to the problems of social development. There is a need to move to forms of management that are better adapted to the new situation. However, now these problems are largely a consequence of the growth of competition at the global level. Therefore, the future lies only with policies based on greater support, greater resources, and greater opportunities to achieve the set goals.

In other words, modern politics cannot be effectively formed and implemented except on a network basis. In many cases, the traditional (hierarchical) model of policy and management becomes less effective in such conditions [56, 59]. And the state should unite efforts, playing the role of an intermediary in the corresponding system of political decision-making. Such a political network can lead to greater social efficiency.

In particular, this also applies to social policy, because it must be conciliatory and coordinated. Separate directions can be formed according to the sectoral-network principle with the participation of interested parties on a parity basis. This will allow combining resources, political potential for influence, professional and political experience to effectively solve the problems of society. However, this applies primarily to strategic issues. Naturally, the activity of such networks is based on trust [61-63]. This is a break with the traditional concept that determines the dominant role of the state in socio-political processes.

As measures to correct social policy in many countries, a search has begun for new correlations of the basic principles of social policy, such sizes and forms of social guarantees that would not suppress incentives to work, would not hinder economic growth and efficiency. It is noteworthy that social budgets in most countries, despite the "audit" carried out, began to grow in absolute terms, and in many cases - in relative terms, since the previous, even revised, obligations of the state are significantly supplemented by a number of new ones associated with such phenomena as the aging of the population, the transition to continuous education, the growth of unemployment, the expansion of migration flows, the instability of the family, etc. [53].

The role of the implications of globalization processes in changing the foundations and content of social policy should be

especially emphasized. In particular, the adoption in 2015 of 17 UN sustainable development goals (already mentioned above in the context of racial inequality in the USA), including the eradication of poverty and hunger, raising the standard of living and employment of the population, ensuring inclusive and equitable quality education and promoting opportunities for lifelong learning, reducing inequality within and between countries etc., influenced the development of international and national law and social policy.

The distribution of powers between state authorities and the involvement of non-state actors in the process of implementing the national policy in the field of sustainable development are significant factors in the process of localizing the SDGs. The structure of executive authorities responsible for ensuring sustainable development reflects the national vision of the SDGs and the priority nature of certain industries. For example, the priority areas for achieving the SDGs for Brazil, both internally and externally, are decent employment and job creation, combating youth unemployment, ensuring sustainable and efficient use of resources (primarily water and fossil fuels), development of tourism [64-67]. Much attention is also paid to the eradication of poverty, the fight against hunger, and the development of infrastructure.

In many countries, sustainable development strategies are inclusive and involve all or most regulatory state departments. Special coordinating bodies are also being created to ensure the coherence of government actions in the field of sustainable development. At the same time, along with the coordination of the activities of state bodies in the field of sustainable development, an important role is also played by ensuring the accompanying rights and interests of non-state actors - civil society, business, certain social and ethnic groups, etc. In this regard, various states also demonstrated a high level of institutional readiness to take into account the interests of these groups.

Since the experience of different countries in the field of sustainable development varies greatly, all the goals and corresponding targets of the 2030 Agenda are formulated in a general, universal form, and specific quantitative goals, as a rule, are absent. It is assumed that each country should localize the SDGs, that is, independently select from the 169 tasks of the 2030 Agenda those tasks that it will solve until 2030, based on its development priorities and financial capabilities, adapt them to its national conditions (that is, reformulate), and also, if possible, determine quantitative goals for each task according to the statistical indicators corresponding to it [25]. Tasks and specific quantitative goals should be fixed in national strategic documents, which are one of the key foundations of national social policy.

As of 2022, "six years after the adoption of the 2030 Agenda and the SDGs in 2015, a majority of governments had by 2021 developed strategies and action plans to implement the goals. For many governments, this takes the form of a national sustainability strategy that is explicitly linked to the 2030 Agenda goals and targets. Some governments though have preferred to take a mainstreaming approach, whereby the SDGs are implemented by each government ministry within the scope of its mandate (instead of via an overarching national action plan)" [55].

It should also be noted that within the framework of the ESG paradigm (environmental friendliness (E), social responsibility (S) and high-quality corporate governance (G)), traditional risk assessment practices have expanded by including environmental, social, and management indicators in social policy models [10].

With the development of information and communication technologies, it becomes increasingly more obvious that the digital skills and digital capital of individuals to a large extent influence the success of their social activities in a wide range of areas - from education to healthcare. As a result of this state of affairs, better-skilled digital users gain an advantage over those with more modest skills, and this creates the basis for a new

form of social differentiation. Thus, the second dimension of the digital divide is manifested, related to the specifics of Internet use. Evidence from research on the digital divide suggests that it broadly coincides with traditional sociological signs of differentiation. In particular, there is evidence of the impact on the digital divide made by gender, race, ethnicity, and level of education [43]. Thus, the digital divide is based on already existing social differentiation. At the same time, specific digital forms of inequality are also emerging, which do not coincide with the already existing types of social differentiation, but rather reflect the individual experience of using digital technologies. Another area where the digital divide is acute is the growing field of telemedicine, which involves the provision of medical services at a distance using digital technologies. Currently, telemedicine is considered as a promising tool for reducing the cost of medical care and equalizing access to medical services. However, a serious problem in this case is that the groups most in need of medical services (people with low incomes, social minorities, the elderly, etc.), as a rule, do not have the capabilities and necessary skills to use digital technologies. This problem is exacerbated by the patient-centered nature of many of the solutions offered by telemedicine, which shifts the focus to prevention and the implementation of treatment strategies by the patients themselves, that in itself requires certain intellectual skills.

At the same time, according to experts from the FAO and other international organizations, the growing digital divide may become "the new face of inequality," since the lack of access makes almost half of the world's population autonomous [57]. A representative of the agrarian community of Bangladesh A. Borhan spoke very emotionally, but fairly, at the meeting of the Regional Conference of the Food and Agriculture Organization of the United Nations (FAO) for Asia and the Pacific: "We need not just digitalization, we also need "digital justice", under which Asia's small land users understand the most elementary technologies that provide communication with the external environment for basic information about the weather, markets, access to education" [58]. The issue of connecting rural areas to the Internet underlies digital integration as a phenomenon that is opposite to the digital divide and means smoothing the gap in the economic and social opportunities of individual entities. Thus, overcoming the digital divide (that is, the digital inequality) has become one of the important areas of social policy in most states.

An analysis of current trends and the regulatory framework shows that society is rapidly transforming. The regulatory framework in the field of information technology has not only been structured and updated over the past few years, but has also created a fundamentally new vector of development in the field of digitalization of the state.

Thus, it can be seen that government policy is changing in response to the challenges of the rapidly developing information society. In this regard, it is important to direct the state policy in the field of digital transformation towards the creation of a high-quality regulatory legal framework, as well as development institutions that will act as a driver for the development of the entire digital transformation mechanism in the public and private sectors.

Digitalization processes improve both business and political space. In the context of modernization, the most successful solution for the state and business is the interaction and mutual understanding of the participants. The organizational mechanism that currently exists must work systematically so that all its elements interact. Business structures often look back at the opinion, situation, management decisions that arise in the political space. Gradually, political management becomes a mediated and virtualized process. Thus, certain risks arise. For example, political media reality can distort the perception of the information received, which can lead to various consequences. However, the transition from the established methods of political management to mediated and virtualized ones has already been completed, and here it is important to carefully control these

processes. Real political processes are inferior to mediated ones and are perceived as political reality, although 'de facto' they are of a virtual nature. All this inevitably influences the society requirements and real needs concerning social policy.

An important property of a social system that must be taken into account when implementing social modeling is emergence. Similar is the presence of new properties in the whole, that were not previously observed in its constituent elements. It arises as a result of the action of synergistic relationships (ties) that provide an increase in the effect of the interaction of the social system' elements. This implies the interpretation of such objects of social modeling as an integral entity, and not as a collection of separate parts. In any case, systemic problems require systematic solutions.

In our opinion, it is necessary to consider social policy, firstly, in a systemic context, but taking into account the central role of the state, and secondly, in the context of general, strategic goals - as a political activity aimed at strengthening and positively transforming society. Namely this focus is the essence of modern responsible strategy and policy of the state. And certain reforms, in particular those carried out in developed countries, should be designed to strengthen this character of social policy.

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MAIN ROUTES FOR IMPROVING THE EFFICIENCY OF MARITIME TRANSPORT IN THE FACE OF NEGATIVE EXTERNALITIES

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Abstract: The article examines the current features of the maritime transport system. The specifics of the impact of negative externalities on the dynamics of maritime transport and the dynamics of international trade in recent years are considered. The relationship between the dynamics of world GDP growth and the volume of maritime transport is analyzed, taking into account that this industry is dependent on the state of the world economic system. It has been researched that the main way to improve the efficiency of the maritime transport system in modern conditions is the widespread introduction of digital and information technologies in the activities of transport companies. The key advantages of digitalization of the maritime transport system, which consist of the application of flexible logistics principle in business processes, are identified.

Keywords: maritime transportation; efficiency; digitalization; maritime transport.

1 Introduction

The systemic crisis that has engulfed global trade and international trade since 2020 has caused negative trends in the shipping industry, leading to destructive transformations in this sector. The COVID-19 pandemic has threatened the entire system of international shipping and caused a shortage of capacity in the logistics of the goods delivery. The unbalanced regulatory policy of some countries during this period also led to problems with the staffing of transport companies. The intensification of trade wars between the US and China, as well as China's unjustified zero-tolerance strategy towards COVID-19, also had a negative impact on the industry and led to a reduction in turnover in certain areas of economic activity and forced transport companies to reorient their services to other markets. In addition, Russian aggression against Ukraine had a significant impact on the dynamics of international transport. As a result of the international community's adoption of a set of fair sanctions against Russia's aggressive, degenerate, and anti-civilization policy, significant changes have taken place in the structure of transport, including maritime transport.

In today world, maritime transport is considered the most profitable and versatile in both international and domestic trade. Maritime transport plays an extremely important role in international transport and is highly efficient compared to other modes of transport. However, maritime transport is also subject to fierce competition. At the same time, there is a problem of ensuring the efficiency of international maritime transport as a tool for increasing the competitiveness of the transport and production sector. In particular, maritime transport is characterized by relatively high costs of maintaining permanent facilities, which limits its competitiveness on short routes. However, for long-distance transport, maritime transport has the lowest costs compared to any other mode of transport. This property is extremely important, so in most cases, sea transport is preferred. In addition, seaports are an integral part of the transport and production infrastructure of maritime transport, given their location along international transport corridors. In general, the entire competitiveness of the maritime transport system in the global market depends on the efficiency of seaports, the level of their technological and technical

equipment, and the compliance of the management and infrastructure development system with modern international requirements.

Thus, in today's environment, characterized by a significant impact of negative factors on international trade in general and the maritime transport system in particular, the relevance of researching the problems of ensuring its efficiency is growing significantly. Therefore, solving these problems requires the application of new approaches based on the formation of new global trends in economic development, including digital and information technologies.

2 Literature Review

A lot of works in modern economic science are devoted to the study of problematic issues related to ensuring the efficiency of international maritime transport. In particular, studies of improving the efficiency of transportation based on the use of expert, information, and analytical systems, forecasting, and modelling systems that take into account trends in macro- and micro-environmental factors are currently of particular relevance. They are important in the increasing of transport companies' competitiveness, ensuring the growth of maritime transport efficiency, optimizing operating costs, and developing new equipment. This issue has been widely considered in the works of such researchers as I. Balaniuk [1], I. Britchenko [3-11], Y. Danshina [13], S. Koshova [22-23], N. Kunitsyna [25], Y. Pozdnyakov [27], J. Reitšpís [29], O. Shubalyi [34-35], O. Stashchuk [41-42], I. Tsybaliuk [44], Ya. Yanyshyn [53], O. Yatsukh [46], A. Zielińska [48], and many others.

It is also worth noting that the study of ensuring the efficiency of maritime transport is based on the use of the hierarchy analysis method, which allows for predicting scenarios of development strategies and thus can be useful for making management decisions. In this aspect, it is necessary to note the works of such scientists and practitioners as O. Binert [2], Y. Chaliuk [12], M. Dziamulych [14-21], M. Kryshchanovych [24], M. Masl'an [26], O. Ramos [28], T. Shmatkovska [31-33], R. Sodoma [36-40], I. Tofan [43], I. Yakoviyk [45], O. Yermakov [47], and others.

However, as practice shows, the growing number of negative externalities affecting the functioning of international trade leads to the need to develop new managerial and analytical approaches to ensure the efficiency of maritime transport. This requires further research in this area, taking into account the need to apply more effective performance management tools.

3 Materials and Methods

In the process of carrying out the presented research, we used a complex of general scientific and specialized methods of scientific knowledge.

Empirical knowledge is based on the study of reality and practical experience. Empirical research methods are decisive in the research work and ensure the accumulation, fixation, and generalization of the original research material. The data obtained with the help of these methods are the basis for the further theoretical understanding of cognitive processes and create a holistic unity of scientific knowledge.

An important role in scientific research is played by cognitive tasks that arise when solving scientific problems. Empirical tasks are aimed at the identification, accurate description, and detailed study of various facts, phenomena, and processes. Empirical research provides an opportunity to obtain versatile information about the state of phenomena and processes and contributes to the deepening of their quantitative and qualitative analyses.

Comparison is one of the most common methods of cognition, which establishes the similarity or difference of various objects

of research according to certain characteristics. Comparison is the process of comparing objects or phenomena of reality in order to establish similarities or differences between them, as well as finding a common, inherent thing that can be characteristic of two or more objects of research.

Comparisons are widely used to systematize and classify concepts, because it makes it possible to correlate the unknown with the known, to explain new things through already existing concepts and categories. At the same time, the comparison is a prerequisite for analogy.

Visual, or graphic, methods - graphs, schemes, diagrams - make it possible to get a synthesized idea of the researched object and at the same time to visually show its components, their specific weight, and cause-and-effect relationships.

Infometric methods were used in the work. Informatics studies mathematical and statistical methods, as well as models and their use for quantitative analysis of the structure and features of scientific information, and patterns of scientific communication processes, including the detection of these patterns themselves. A characteristic feature of informatics is that its main goal is to obtain scientific knowledge directly from the information.

4 Results and Discussion

As practice shows, today's realities are transforming the operating conditions of the entire transport and logistics sector of global trade, including the system of maritime freight transport. This is due to a number of factors, the key ones being digitalization, the dynamics of domestic markets, the dynamics of international trade, changes in logistics processes, and the introduction of new software into the operations of transport companies. It can be argued that the practical implications for the international maritime transport system caused by the above factors are already noticeable. In particular, the transition to general digitalization, and the introduction of new equipment and software in the activities of maritime carriers have become the determining factors for many transport companies to adjust their business processes.

At the same time, in recent years, there has been a significant decline in the growth of international shipping volumes. And the impact of the global pandemic and other trade risks has even led to a decrease (Figure 1), which has resulted in an overall decline in revenues in the shipping industry.

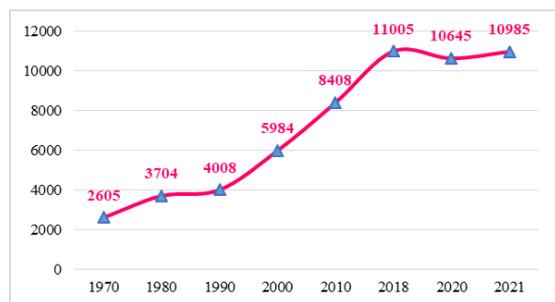


Figure 1. Dynamics of international sea freight in 1970-2021, million tonnes
Source: [30]

As we can see, the crisis trends have resulted not only in a reduction in the volume of traffic but also in direct losses for transport companies. At the same time, it should be noted that the entire global shipping system is highly dependent not only on the dynamics of international trade but also on the economic growth rate of the global economy in general. This is due to the significant influence of globalization, which has so closely linked various economic clusters that their interaction is possible only in conjunction with each other. Therefore, the issue of forecasting the dynamics of maritime transport largely depends on the growth rate of the global economy. This dependence can

be verified by analyzing the dynamics of global GDP and the dynamics of maritime traffic over the relevant period (Figure 2).

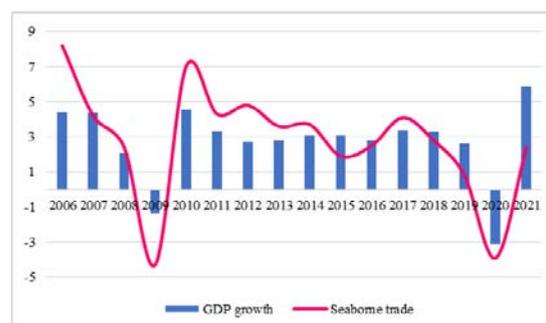


Figure 2. Growth dynamics of international shipping and world GDP in 2006-2021, %
Source: [30]

As we can see, the key points of change in the dynamics of both indicators are synchronized, which can be traced back to the financial crisis of 2008-09 and the COVID-19 pandemic.

Thus, when determining the objective need to improve the efficiency of the maritime transport system, it should be noted that due to the dependence of the transport itself on global economic and political trends, its improvement should relate to the management mechanism of transport companies and raising of the productivity of the analytical apparatus used in the process of planning logistics flows. At the same time, the rational planning of logistics flows in maritime transport involves an efficient procedure for the formation of cargo, and efficient distribution of cargo accumulation costs between the road, shippers, and consignees.

Achieving these objectives in the current environment is possible only through the rationalization of business processes of maritime transport companies based on the use of the latest digital and information technologies. It is understood that the introduction of digital technologies has significant reserves for a sound increase in the efficiency of maritime transport through the widespread automation of business processes, an overall reduction in the time and costs of administrative operations, improved safety, and greater accuracy in the planning and providing transport services. At the same time, the main ways of integrating digital technologies into the system of international maritime transport include the following:

1. The use of the Internet of Things (IoT) – the placement of sensors on ships and containers to track their current location, state, and cargo conditions, which will allow transport companies to more accurately plan their own logistics routes, improve the safety of cargo and generally increase the safety of transportation.
2. Use of cloud technologies – storage and processing of data in the cloud will allow maritime carriers to reduce the cost of building their own IT infrastructure and provide prompt access to information from any location.
3. The use of automated control systems that can provide automated control of the vessel, including control over fuel consumption, cargo condition, route, and other logistics processes, will result in increased efficiency of transportation and reduce the risk of errors.
4. Use of weather monitoring and forecasting systems. Such systems allow for the prompt receipt of information on weather conditions and timely response to natural disasters, which reduces the risk of cargo loss by carriers and reduces insurance costs, that account for a significant share of the cost of transportation, even if ship-owners participate in insurance pools.
5. Use of artificial intelligence and machine learning systems. These technologies can be used to forecast demand for transportation, determine the best route, and optimize schedules and other processes, which increases the

efficiency of maritime transportation and reduces ship owners' costs.

6. The use of electronic document management systems that effectively reduce the time required to process cargo-supporting documents, which reduces the time costs, increases the efficiency of interaction with shippers and consignees, and significantly reduces the risk of errors in making management decisions regarding the planning of transport companies' operations.
7. Use of drones to monitor cargo and ensure safety on board a ship.

In general, it can be argued that the introduction of digital technologies can significantly increase the efficiency of the entire international shipping system, reduce ship owners' costs and improve the safety of doing business in this area. Undoubtedly, the main benefits of introducing digital technologies into the business processes of maritime transport companies are related to cost reduction and acceleration of cargo movement. Moreover, their implementation provides significant competitive advantages for those companies that invest in the development and integration of the necessary software solutions into their own business processes.

At the same time, it is necessary to take into account the need to incur significant costs for the development and implementation of digital software solutions that will form the basis of transport companies' activities, as well as to take into account potential risks related to cybersecurity and data protection. In particular, the main risks inherent in integrated business process management systems include the following:

1. Digital systems may be subject to cyber-attacks, which may result in data theft, destruction of various systems, and in some cases, ransom demands for their restoration, etc.
2. Risk of data leakage – digital systems collect and store a large amount of data on users, logistics, maritime transport, and other processes, which may be subject to data theft and undesirable use.
3. The increase in the number of network-connected devices, including ships involved in transport, may result in unauthorized access to systems and information, which may adversely affect the business processes of transport companies.
4. Equipment failures – digital systems can be sensitive to electrical interference, which can lead to equipment failure and reduce the efficiency of automated transport control systems.

However, it can be noted that the general and most significant advantage of the widespread use of digital and information technologies in maritime transport will be a significant increase in the flexibility of logistics throughout the system. Already, global vessel tracking systems allow managers to plan their use for cargo transportation several months in advance. As the efficiency of systems for monitoring the operation of transport companies and each individual vessel in them increases, the possibility of more reliable forecasting of each stage of the business process in the future is growing. Therefore, digital technologies and software solutions are the basis for ensuring the growth of the efficiency of the maritime transport system.

5 Conclusion

We conclude that in today's environment, improving the efficiency of logistics management in the field of maritime transport requires the development of fundamentally new approaches to ensure maximum efficiency of management decisions at all stages of cargo movement, an appropriate level of interaction with the external environment and the maximum reduction of management costs in business processes. Digitalization makes it possible to solve these problems with the highest possible efficiency by speeding up operations at all stages of freight transportation, which will allow transport companies to create new unique and comprehensive solutions for their customers in the field of cargo delivery. The overall acceleration of the digital transformation of business processes

in the maritime transport sector will make it possible to move all management interactions both within companies and in their contacts with customers online. At the same time, the widespread use of artificial intelligence and chatbots to improve the efficiency of interaction and the effectiveness of management decisions will be crucial to ensuring the appropriate level of competitiveness of maritime carriers in the market.

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ACCOUNTING AND ANALYTICAL TOOLS FOR THE FORMATION OF SUBORDINATED DEBT OF COMMERCIAL BANKS IN UKRAINE

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Abstract: The article considers the current specifics of accounting for hybrid financial instruments in the process of forming the regulatory capital of commercial banks in Ukraine. The important role of subordinated debt as a component of the bank's equity capital is determined. The dynamics of changes in the total subordinated debt and the capital adequacy ratio in the banking system of Ukraine in the crisis conditions of the war, which results in instability of financial markets, is studied. The special role of subordinated debt in the process of ensuring the financial stability of commercial banks and increasing their capitalization is noted. The need to enhance the ability of banks to attract hybrid instruments for increasing their regulatory capital is determined.

Keywords: commercial banks; capital; economic security; subordinated debt.

1 Introduction

Increasing the amount of bank capital is one of the strategic objectives of the development and functioning of the Ukrainian banking system. At the same time, the problem of increasing the capitalization of banks in line with the growth of markets and the national economy as a whole has always been and remains relevant for the economic system. The banking system of Ukraine is no exception in this regard, as its main development goals are currently determined by the priorities of European integration and globalization processes, which are closely linked to significant changes in the country's economy, the financial basis of which is the economic security of the banking system. In addition, the challenges faced by Ukrainian commercial banks since the beginning of the Russian aggression have forced them to fundamentally reconsider their approach to the formation of their own resources, including equity capital, which is the basis for ensuring their creditworthiness in the interbank market.

Accordingly, in the current environment, subordinated debt is of particular relevance in the process of raising bank capital, as it is an important tool for commercial banks to ensure their financial stability. Subordinated debt is a specific type of debt instrument that is payable after all other debt obligations of the bank. As Ukrainian banks are experiencing objective difficulties in replenishing their equity capital in the context of tension in the financial markets due to the active phase of the war, they are facing significant challenges in finding effective sources of equity capital increase through traditional (reinvestment of profits, additional issue of shares) and non-traditional sources (attraction of subordinated debt, securitization of assets). This is what will allow banks to conduct a wide range of active operations using available resources and will balance all the risks associated with the sufficient amount and reliability of the generated resources. Thus, it can be argued that strengthening the resource base contributes to increasing the ability of banks to meet the current and investment needs of business entities and households for additional financial resources. At the same time, the problem of the formation and use of resources by banks has become much more acute in Ukraine due to the growth of

interest rates as a result of the destructive impact of Russian aggression on the markets. The resources provided by borrowers for use by the bank are becoming shorter, more expensive, and very unstable.

In such conditions, when there is a growing need to attract additional resources to the banks' equity, subordinated debt is of particular importance, as it is a rather effective tool for replenishing equity. At the same time, there are objective concerns about its use in the bank's activities. The main problem is the operational and analytical tools for the formation of subordinated debt, which necessitates in-depth research on this issue.

2 Literature Review

The study of issues related to the resource provision and capitalization of commercial banks is not new to modern economic science and is widely covered in the specialized financial literature. The main focus of these studies is the formation of a sufficient and properly balanced resource base of banks. In particular, the issues of bank capitalization and the search for ways to increase bank capital by attracting subordinated debt were addressed by such scholars and practitioners as I. Balaniuk [1], Y. Chaliuk [11], M. Dziamulych [13-19], O. Ivanenko [21], M. Kryshchanovych [24], N. Kunitsyna [27], M. Masl'an [29], Y. Pozdnyakov [32], J. Reitšpís [34], O. Shubalyi [37-38], I. Yakoviyk [41], and many others.

In addition, it is necessary to note the research related to the study of the economic essence of subordinated liabilities, their role, and their importance in banking as an additional source of replenishment of the bank's equity. The study of this issue is widely covered in the works of such scholars as I. Britchenko [2-10], Y. Danshina [12], N. Hurzhyi [20], S. Koshova [22-23], T. Kulinich [25-26], O. Lazorko [28], O. Polishchuk [31], O. Ramos [33], T. Shmatkovska [35-36], R. Sodoma [39], A. Zielińska [42], and others.

However, as already noted, the formation of destructive conditions in the financial markets has significantly complicated access to financial resources for commercial banks, including for replenishment of equity capital. Therefore, there is an objective need for an in-depth study of the current specifics of the formation of subordinated debt of banks, which can be used in the process of increasing their capitalization.

3 Materials and Methods

The study of the problems of formation of subordinated debt of commercial banks implies the need to improve the methodology for calculating all subordinated debt, or a part of it, which is included in the bank's equity, as well as its constituent elements, which are classified as hybrid.

In accordance with the National Bank of Ukraine (NBU's) methodology, subordinated debt is ordinary unsecured debt capital instruments (components of capital) that, in accordance with the agreement, cannot be withdrawn from the bank before five years and, in the event of bankruptcy or liquidation, are returned to the investor after all other creditors' claims have been paid. The amount of subordinated debt included in the capital is annually reduced by 20 percent of its original amount during the last five years of the agreement. The sources of subordinated debt funds are the investor's own and/or borrowed funds, except for those raised from the debtor bank [30]. In addition, it is prohibited to directly or indirectly provide loans for the purchase of own securities and shares of other banks, and to provide subordinated debt to banks. The use of treasury securities to secure loans is possible only with the permission of the National Bank of Ukraine.

In their economic essence, subordinated liabilities are borrowed funds from the bank, which must ultimately be returned to the

owners. However, given the rather long-term use of these funds and the possibility of their conversion (in particular, into bank shares), such borrowed funds are treated as equity. Banks can repay their previous debt with new borrowings, using this source of funds indefinitely. According to the Basel III Accord, a bank's capital consists of elements of Tier 1 and Tier 2 capital, which are limited and restricted to a certain extent [40].

In addition, hybrid (debt/equity) capital instruments include those that may have features of both equity and debt. The main criteria that such instruments meet are as follows:

- Hybrid equity instruments are unsecured, subordinated, and fully paid;
- They cannot be redeemed at the initiative of the holder (or without the prior consent of the regulator);
- Hybrid equity instruments can be freely used to cover losses without requiring the bank to cease trading operations;
- The equity instrument (unlike dividends or ordinary share capital and similar to cumulative preference shares) provides for the possibility of deferring the servicing of interest obligations if the bank's profitability does not allow it to make such payments.

Such criteria are in line with the Basel Capital Accord [40].

Accordingly, for the purpose of calculating subordinated debt, it should be taken into account that if debt capital instruments do not meet the above criteria, they should be classified as subordinated term debt.

4 Results and Discussion

The current complex features of banking activity in Ukraine pose difficult tasks for commercial banks in the field of increasing their capitalization. In particular, under conditions of limited opportunities to increase equity capital at the expense of shareholders, there is an objective need to issue innovative instruments for attracting bank capital, for example, the issue of subordinated debt obligations. It is worth noting that the mechanism of raising funds on the terms of subordinated debt is much simpler than the one used in the case of the share issue. Capital formation through the issue of subordinated liabilities and securities contributes to the increase in the profitability of the bank's shares if the income from the placement of funds exceeds the costs associated with their borrowing. In general, raising funds on the terms of subordinated debt is more acceptable for banks also in view of the difficult economic situation in Ukraine, in which it is problematic for banking institutions to place shares, as they can be purchased only at the expense of shareholders' own funds.

As banking practice shows, compared to conventional debt, subordinated debt has some features that make it more attractive to commercial banks, namely:

1. Subordinated debt allows banks to increase their capitalization without reducing their control over the bank. This is possible because it does not give voting rights to bondholders. Thus, the bank can raise capital without risking losing control over the bank's management.
2. Subordinated debt allows banks to increase their capitalization without reducing their liquidity. Since subordinated debt is a long-term instrument, a bank can use it to ensure long-term financial stability without compromising its liquidity.
3. Subordinated debt can be used as a tool to ensure compliance with regulatory requirements, as the NBU requires banks to maintain a certain level of capital to ensure their financial stability by setting mandatory ratios.
4. Subordinated debt can be attractive to investors as it often has higher yields than conventional bonds. This can attract investors looking for high-yield investments.
5. Subordinated debt can help a bank raise capital at a time when conventional sources of funding, such as issuing shares or ordinary bonds, are not possible or are inefficient.

All of these factors make subordinated debt an important tool for commercial banks to ensure their financial stability and raise capital. However, it is worth noting that there is a risk for investors who buy subordinated debt, as they may suffer losses in case of default by the bank. Therefore, before purchasing subordinated debt, investors should carefully analyze the bank's financial position and the risks associated with this instrument.

To assess the situation with the formation of regulatory capital and subordinated debt of Ukrainian banks after the outbreak of war, let us look at the dynamics of the relevant indicators for 2022-2023 (Figure 1).

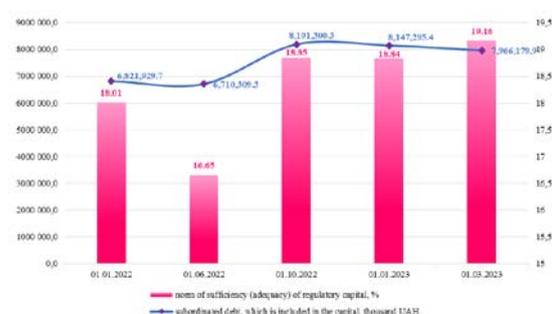


Figure 1. Dynamics of subordinated debt and regulatory capital adequacy ratio in the Ukrainian banking system in 2022-2023
Source: [30]

As we can see, after the start of the Russian aggression, the total subordinated debt of Ukrainian commercial banks decreased by UAH 111.6 million. However, after the situation in the financial markets stabilized in the summer of 2022, banks began to actively increase their volume, due to a shortage of sources of capital replenishment as a result of the overall increase in risks to the banking sector. As a result, as of 1 October, the aggregate amount of subordinated debt in the banking system reached a maximum of UAH 8,191.3 million. However, there is still a downward trend in the aggregate value of this indicator, although as of 1 March 2023, it is almost UAH 1,335.7 million higher than the aggregate subordinated debt of the Ukrainian banking system before the outbreak of war.

Another important indicator in this regard is the banks' regulatory capital adequacy ratio, which also includes subordinated debt. The trends in this indicator are somewhat different from those of subordinated debt. In particular, after a 1.36% decline in its importance for the Ukrainian banking system in mid-2022, the ratio has only increased, reaching 19.16% as of 1 March 2023, which is 1.15% higher than before the war. This is due to the banks' desire to ensure an adequate level of their own financial stability by increasing their share of the equity. At the same time, despite the minimum permissible value of this ratio of 10%, commercial banks seek to ensure that it is exceeded in the face of increased risk in the financial markets.

As it is well known, the Basel Accord on International Capital Standards provides for the issuance of long-term securities (debt) by banking institutions to increase their equity. Such obligations of banks are of a subordinated nature or second priority. Accordingly, subordinated debt is a debt that arises in a bank in the event of attracting investor funds to be included in the capital. That is why, in the face of uncertainty, commercial banks that have an objective need for both capital and financial stability, which guarantees their credibility in the market, seek to attract equity capital as part of subordinated debt, as this allows them to comply with the standards set by the regulator and also significantly reduces the cost of this method of increasing equity capital compared to alternative methods.

Accordingly, given the importance of subordinated debt for commercial banks in modern conditions, there is an objective need to use effective accounting and analytical tools for the formation of subordinated debt suitable for inclusion in the

regulatory capital. In particular, raising funds on the terms of subordinated debt with a view to their inclusion in the bank's additional capital may be carried out either by concluding direct agreements between the debtor bank and the investor or by issuing bonds by the debtor bank on the basis of a special agreement with due regard for the special conditions of their issue and repayment.

In order to track changes in the share of subordinated debt in the regulatory capital of Ukrainian banks, let us look at its dynamics over the past year (Figure 2).

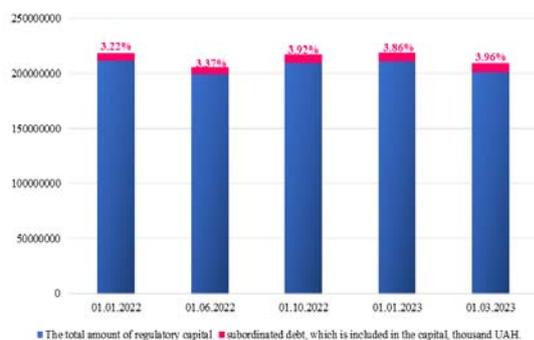


Figure 2. The ratio of regulatory capital to subordinated debt and the share of subordinated debt in the Ukrainian banking system in 2022-2023

Source: [30]

As we can see, despite the general trend towards a decrease in the total amount of regulatory capital in the banking system, the share of subordinated debt in it has been growing since the beginning of the war and as of 1 March 2023 exceeded the corresponding value by 0.84% compared to the beginning of 2022. Therefore, the trend of banks increasing their equity capital by raising subordinated debt can be considered confirmed. On the other hand, the generally low share of subordinated liabilities in the equity and regulatory capital of Ukrainian banks indicates that the replenishment of their capital base by raising capital on the terms of subordinated debt is slow. At the same time, it is clear that not all medium and small banks are able to use this source of capital replenishment. The growth rate of subordinated capital in the banking system in 2022 increased significantly compared to previous periods.

Thus, it can be argued that the effective development of Ukraine's banking system in the current environment is impossible without a sufficient level of capital base of commercial banks. Due to the volatility of the financial markets, Ukrainian banks are currently able to increase their equity capital without changing the shareholding - only through subordinated debt.

5 Conclusion

Thus, we conclude that subordinated debt has a dual economic nature: on the one hand, according to financial accounting rules, it should be included in bank liabilities that will be repaid to the creditor. On the other hand, subordinated debt is considered to be a component of equity when calculating capital ratios, which can lead to difficulties in determining the real financial position of commercial banks. Nevertheless, this method of capital replenishment is currently quite common among commercial banks in Ukraine, as it allows them to comply with the economic standards for the size and adequacy of equity capital set by the NBU, and contributes to the overall increase in profitability of banking activities by reducing capital costs. Therefore, the introduction of hybrid capital instruments into the practice of Ukrainian banks will have an overall positive impact on their financial stability. At the same time, it should be noted that there is a need to improve the system of banking supervision and assessment of commercial banks' equity capital, which will enhance the inclusion of hybrid instruments in regulatory capital. This will allow commercial banks in Ukraine to increase their

capitalization levels in the future, which will have a positive impact on the overall state of the banking system

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FEATURES OF FINE ARTS OF THE EARLY 21ST CENTURY: PAINTING, DRAWING, SCULPTURE

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Abstract: The article is devoted to the study of the intersection of contemporary art, philosophy and technological trends. It is shown that art, including contemporary art of the early 21st century, is one of the ways of understanding the world, visual philosophy, the artist's vision, a reflection of his perception of the surrounding space, which led to paradigm changes in the form of the emergence of digital art and its convergence with classical creative postulates, resulting in the formation of new forms and genres - in particular, installations as a type of sculpture, as well as convergent styles in painting.

Keywords: contemporary art; digital art; drawing; installation; postmodernism.

1 Introduction

The culture of the first quarter of any century is a special and very rich phenomenon: namely at that time, society is aware of the cultural heritage of the previous time and moves forward, discovering new styles and directions. The first quarter of the 20th century turned out to be especially interesting and diverse, when time accelerated, driven by wars, the development of technology and the industrial revolutions that followed one after another, and with it changes in society, culture and art accelerated - and the usual dominance of one "great style" in art was replaced by the rapid development of numerous individual areas.

In the 20th century, in addition to the varieties of realism, impressionism, fauvism that came from the 19th century, many trends were formed that smoothly spilled over into the beginning of the 21st century: post-impressionism, post-fauvism, various areas of abstract art, constructivism, expressionism, surrealism, primitivism, kitsch, conceptualism, etc. Since the end of the 20th century, in the art of postmodernism, all these trends have been mixed up and used by contemporary young artists. New contemporary art was created on the basis of "quotations from the past" [2].

In addition, tired of the 'shackles' of the harsh rules of the past, young artists decided to break the old artistic norms. They sought to create new, previously unknown practices. Opposing themselves to modernism, they turned to new ways of revealing their plots. The artist and the concept behind his creation have become much more important than the very result of creative activity. The desire to move away from the erected framework led to the emergence of new genres [1].

The current stage in the history of culture, which is commonly called the era of postmodernity, is accompanied primarily by the destruction of the idea of the author and the work, and hence cardinal changes in the field of art. The artistic process of the beginning of the 21st century is fundamentally different from everything that existed before. Postmodernism is regarded as a "reaction to the modernist cult of the new", as an elite reaction to mass culture, as a polycentric state of the ethical and aesthetic paradigm [9]. In the new pluralistic cultural and communicative situation, mass media play an important role, which are enriched with increasingly more diverse and sophisticated possibilities for transmitting information.

Scientific and technological progress (STP) has led to a modern technogenic civilization, which has influenced the artistic

culture, all types of traditional art and caused the emergence of the latest varieties of art practices. As a result, fundamentally new types of art arose that influenced the formation of the consciousness of the newest type: "The language of traditional (literature, painting, music, theater, ballet) and technical (photography, cinema and other screen arts, multimedia) arts is changing, actual technical art practices (performances, actions, installations), as well as the latest online art phenomena" [22]. All this suggests that the scientific and technical progress has an impact on changing the mentality, the psychology of perception, the way of thinking, ideology, the system of human worldview and traditional means of artistic expression (pictoriality, expressiveness, descriptiveness, tonality, rhythm, etc.). Thus, there is a substitution of being by consciousness.

In our opinion the study of contemporary fine arts acquires particular importance in the context of global transformations of social reality. Globalization and the development of new technologies have forced artists, philosophers, culturologists, art theorists and historians, curators, museum staff, and viewers to rethink the basic principles by which the art world is built. Today, the economic infrastructure of the art world is changing significantly under the influence of the process of globalization and the introduction of new information and telecommunication technologies. Synthesizing the achievements of the latest technologies, the art of recent decades seeks to expand its existential boundaries, creating new discourses that are not only incorporated into various cultural practices that lead to a change in cultural standards, but also include the sphere of politics, science, and philosophy into the space of fine art. Cross-border, liminality, growing transgression, "enduring transitivity" become essential signs of the fullness of fine art.

The expansion of knowledge about contemporary art in the humanities, which is characteristic of the last decades, leads to a complication of the structural, content, and functional characteristics of the phenomenon. The range of issues associated with the cognition of art in philosophical discourse increasingly reveals the meaning and significance of the latter in the understanding by the subject of cognition of the structure of social reality and the diverse forms of being of culture. An analysis of the trends in the development of contemporary art through the prism of a philosophical and cultural approach seems to be an urgent direction for studying the issue, since its results will help shed light on a number of intentions for the further development of art.

2 Materials and Methods

The general scientific methods of synthesis and analysis, modeling and reconstruction, the interpretative method, the systematic method in the study of the phenomena of art and culture were used in the work. The following methods were applied as special methods: cultural-philosophical, comparative, cultural-historical, cross-cultural. The cultural-philosophical approach was used to identify the features of the socio-cultural determination of contemporary art in the era of globalization. The comparative approach reveals the specifics of contemporary art in comparison with the art of modernism and postmodernism. The cultural-historical method analyzes the transformation and expansion of the space of fine arts in the process of changing cultural epochs.

3 Results and Discussion

First of all, it should be noted that postmodernism initially appeared as a visual culture, which differs from classical painting and architecture in that it focuses its attention not on reflection, but on modeling reality. In the 21st century, artificial reality has become as familiar to humans as "real" (objective) reality [23, 24].

The main feature of contemporary art is its concentration on modernity, its documentation. As a rule, the content of many works does not refer us to the past and does not address to the future. The focus is on modernity. The main content is today. There is no *passéisme* or futurism in most creations. Artists seek to involve the viewer in an artistic act in order to document the aesthetic feeling. That is why such forms as performance and action prevail. Art becomes a statement in a certain space when the viewer is involved in the inner fabric of the work. This to some extent unites the visual arts with the theater. And in the theater itself, we see a fuzzy separation of the stage and the hall [3]. In general, today there is an active tendency to combine the arts. The emerging art of video art clearly demonstrates this. Thus, we see, on the one hand, the involvement of the public in the fabric of a work of art; on the other hand, art tends to become extremely documentary. That is why the technique of reproducing the conversations of everyday life is widespread in the theater. This desire to break the boundaries between the sacred and the profane, the religious and the secular, can be seen everywhere.

In addition, the global art space is decentered: the dominance of Western trends in art is giving way to global cultural values, in which the search for new publicly available visual means and a new expressive language of art becomes important. The rhizomatic nature of the art space in the modern world is determined by the financial and political influence of countries on the world of art, in which individual vectors of movement are set by the ideological slogans of curators, and museums and art venues are the nodal points [13]. The elimination of aesthetic criteria from the sphere of fine art and the lack of demarcation between art and non-art entails the need to create new artistic criteria. These criteria are institutionalized within the framework of global cultural production. Such a criterion is the involvement of a work of art in the global cultural space through its actual representation in artistic practices, projects, in the socio-cultural space of museum sites, exhibition centers, biennials, alternative spaces, the Internet, which form the necessary dialogue space.

Considering the concept of "sculpture", it is necessary to directly refer to the category of "art form", however, analyzing the works created at the beginning of the 21st century, one can observe a situation where, in the conditions of art of this period, this term undergoes significant changes, its boundaries are rather blurred. Thus, the purpose for art researchers today is to identify the features of the transformation of sculpture as a species in the second half of the 20th - early 21st century.

There are not only works that, due to their specificity, are at the junction of two, three, or more types of art, but also works that are almost impossible to classify within the classical category of fine arts. So, in the second half of the 20th century, new terms were introduced to denote phenomena that could not be classified in the established system of art forms: installation, land art, public art, etc. Art critics, curators, and artists themselves, speaking about the works of the second half of the 20 - the beginning of the 21st century, increasingly more often refuse to attribute a particular work to any specific type of art, denoting these works by the concept of "object": journalistic and scientific sources that consider art of the 20th - early 21st centuries often study art not in line with morphology types of arts, but from the standpoint of phenomenology and poststructuralism, characteristic of postmodernism. In modern art criticism, different assessments of the changes that have taken place in the art of sculpture are being formed. Nevertheless, most art theorists find a close relationship between new three-dimensional forms, finished objects and the concept of "sculpture" [7, 12, 15, 16].

The American sculptor and art historian Donald Judd, cited in Jefferies, concludes that the boundary between the two media of the art world - painting and sculpture - is disappearing, considering this a manifestation of their hybridization. D. Judd calls the works that appeared in the course of these processes "specific objects" [10]. Other researchers also emphasize that in the 20th century, art is moving beyond painting and sculpture,

into a new area of creativity, which they call the "field of environment" [9]. Based on the above art criticism approaches, we can conclude that the boundaries of art forms in the period from the 20th century to the beginning of the 21st century have gained tangible plasticity, have become more transparent in relation to each other. Moreover, these changes made it possible to analyze works by combining methods of studying different types of art, which was not possible before.

Many art historians note the connection between sculpture, M. Duchamp's finished objects, and other similar works, which in their essence are devoid of almost all the qualities inherent in the classical understanding of sculpture. J. Kidd notes: "... this is how a bicycle wheel, a urinal and a bottle dryer imitate a new abstract sculptural form" [11]. One of the key changes that took place in the art of the early 21st century was the fact that now an object needs certain conditions in order to become a work of art.

So, for example, an installation, being a three-dimensional object, has features characteristic of sculpture. It has a shape, color, reflectivity, and other qualities that can be perceived from the point of view of aesthetics in the conditions of a museum space. Speaking about an installation as a sculptural work, we can appeal to such typical qualities of sculpture as: the surface of a sculptural volume, silhouette and contour, shape modeling, plasticity, light and shadow, material, etc., but considering these qualities of such a work, probably will not give us the opportunity to analyze it, without involving the context of the creation of this work, revealing the concept embedded in it. When analyzing such an object, these categories lose their former functions, become secondary, and the concept, the context in which this work was created, the influence of this work on understanding the essence of art come to the fore. Such a work must be read as a word in the cultural text of the era with many meanings that it carries. Thus, such a work is not a sculpture, but has certain features of sculpture. With the development of fine arts at the beginning of the 21st century, the growing influence of postmodernism, this trend is further developed.

In postmodernism, there is an active influence on art from everyday culture, which has also become one of the reasons for blurring the boundaries of the types of artistic practices. In postmodern philosophy, one can observe the situation of a new dialectic of art and man, his everyday life: the exit of art into a completely different dimension of human existence, accompanied by metamorphoses of the own existence of works of art. The mechanisms of changes in the functioning of modern art practices contribute to the aestheticization of reality. Contemporary artists strive to relate their creativity to the outside world, making the environment part of the artistic object. There is a kind of interpenetration of art and life.

In the art of sculpture, this specific trend manifested itself not only as an expansion of the subject matter of the depicted, but also in the active interaction of the object with the environment and space.

Thus, the modernist tendency to analyze the language of form, the search for new artistic solutions, and later the postmodernist interest in everyday life, the desire for the integration of art and life have led to the fact that the boundaries of art forms have acquired tangible plasticity.

A wide variety of objects of contemporary art often fall under the category of "installation", due to its specificity; sometimes these works have nothing in common with each other. Some works that have obvious features of a sculptural composition fall under the category of installation. Speaking about certain works of contemporary art, some art historians make the concepts of "sculpture" and "installation" identical to each other. Given the trend of developing plasticity of the boundaries of art forms, sculpture can have the features of an installation and vice versa. This is due to the fact that many of these sculptural objects represent a certain spatial field. This feature is not new, examples of sculptural multi-figure compositions are known in the history of art from the origins of the development of this type

of art. However, having gone a long way of development, this phenomenon of sculpture has acquired new qualities associated with the integration of art and everyday life; one of the most characteristic manifestations of this change is the refusal of sculpture from the pedestal. In addition, this trend is characterized by the involvement of the object in the environment, interaction with space, interactivity.

In addition to the similarity of some features of installation and sculpture, one type of art can become an integral element of another. Most often, the sculpture becomes part of the installation.

The mobility of the boundaries of the category "view" in contemporary art leads to the fact that the same object can be interpreted from different angles by the curator, the artist himself, and the audience. The work "Leviathan" by British artist Anish Kapoor, presented at the 4th Monument exhibition in Paris in 2011, consisted of three interconnected 35-meter inflatable balloons. The object has a specific plastic form, in which the artistic concept is revealed not so much in contact with the outside of the work, but rather with the inside, i.e., in order for the viewer to really see the work, to understand the idea laid down by the author, it is necessary to go inside the object. All these methods of interaction with a work from the point of view of classical art history are rather characteristic of the art of architecture. However, the artist positions himself, first of all, as a sculptor and calls his work a sculpture.

The ontological aspect in installation works is the correlation of visual art and architecture, both in the exchange of ideas and methods, and in the design of space. Correlation with various kinds of arts (architecture, painting, film art, music) expands the boundaries. Thus, an installation can be temporary, created for a specific event, or permanent, being a monumental or easel sculptural composition. The new plastic genre contributed to the creation of a special atmosphere, the introduction of rhythms, urban sound into the fabric of a visual and sound object. Not only the very perception of the space in which visual art is placed is changing, but also a different environment is being mastered - from anthropogenic to natural. Not only various materials and the latest tools for artistic comprehension are used, but also ways of interacting with the viewer. The aesthetic value in the composition of the installation creates a certain system of coordinates in space, a new perception mechanism (non-obviousness of semantic contexts, open space), changes the usual structure of a work of art. In the works, an open, mobile space appears, suggesting a special dramaturgy of perception. Many gestures of the avant-garde, destroying the traditional forms, the traditional structure of the pictorial language, have acquired their meaning in the context of the new genre [4, 8, 13]. The art of the installation corresponds to new rhythms, a new lifestyle, a new reality of megacities, industrial districts, urban sound, creating a special energy, its own atmosphere.

Also, with the development of computer technology, the concept of painting expands its capabilities, acquires new qualities. The variability and speed of finding a composition, new color solutions, new forms and directions of painting, the solution of new spatial and semantic tasks - these are the shades of the evolutionary development of painting. Revealing the depth of these shades, mastering the intricacies of modern artistic tools are the tasks of modern architectural and design schools. The current stage in the development of computer art began in the last century, and today computer painting expands our understanding of form and space as such: the form of works in this area is determined by the technical capabilities of the computer environment, and the creative component of the artist. A modern artist and designer can think together with the machine, find adequate application for the immense possibilities that are inherent in modern technology. In the near future, this is the transformation of computer creativity, modeling and embodiment of the image of the artist of the new time.

The interpenetration of art and life has made the first an open system that allows influence on itself from the most diverse spheres of human existence. In the philosophy of the 20th - early

21st century, special attention is paid to art and its comprehension in the general cultural paradigm, positions of understanding art in relation to the entire cultural program are developed and formed, the work becomes an open text. It is impossible to determine whether the philosophical approaches to understanding art are the result of adaptation to the changes taking place in it, or, on the contrary, art is transformed under the influence of these ideas, changes its essence and form - these processes are interdependent, affecting each other at the same time.

The art that exists today is expressed in different forms, and these directions of modernity gravitate more towards modernism and may seem innovative to the audience, divorced from the classical foundation. In this format, the view of contemporary art is not entirely correct, since it may seem that there is a rejection of the traditional experience that was accumulated by outstanding people who worked in different areas of art, using different genres and artistic techniques. But, considering contemporary art in more detail, we note that the formation of new approaches is based on the heritage of world art. For example, in painting, landscape painting becomes popular, which develops on the basis of those techniques, genres that are already known. The fact is that one cannot say that new art forms are born in the minds of artists. This is not the case - despite individual imagination, they are formed on the basis of old creative postulates, acquiring only a new shell.

During the period of active popularization of images through the reproduction of the processes of their rethinking, as well as the selection of the audience, a replacement of those means of expression in the artistic direction that were relevant in the past is going on. They are being replaced by fundamentally new tools. This phenomenon is directly related to the fact that artistic consciousness moves in the plane of self-reflection [2]. For the self-determination of art in the reality that has developed today, it is important for a person to have critical thinking in order to rethink his own experience [16]. Those changes that are observed today are a good basis for the artist to discard the canons that existed when creating realistic landscapes and move on to new approaches to creating form. The fact is that each creator sees his art individually, depending on the emotions, views, values that he has developed.

After analyzing the landscape works of different eras, one cannot fail to notice that each author tried to illustrate his historical time and displayed it depending on the trends that existed. Artists perceived reality differently, showing individualism in their works. Bramantyo rightly speaks on this subject, emphasizing that it is impossible to separate the historical perception of reality by a person from his logic of studying nature and the standards of beauty [3]. The artist perceives nature in the complex of all the qualities that are characteristic of it. For example, an artist, depicting houses or trees, tries to show with their help not only the architecture of the surrounding nature, but also a certain atmosphere that existed at a given moment in a given place, a reflection of a certain moment in history or a person's or life. Nature, as it were, contains the image of a person, society, historical era [7].

The author also depicts the landscape not just as a visualization of reality, but rather as experiences and emotions, his pain or joy, certain topics in the life of mankind. Coloring and composition help the author to achieve such depth.

In particular, in the study of digital painting, it is not so much the technical side of creating works of digital painting that is of primary importance, but rather the influence of new technologies on the dynamics of the development of the artistic process in the implementation of the artist's creative intention. Analysis of the technological chain allows identifying the following important patterns of the artistic process of creating works of digital painting [21]:

1. A work of digital painting is the same art product of fine art, but created by the mutual influence of computer technology and fine art.
2. The artistic process is carried out mainly not on a stretcher, but on the virtual plane of a tablet or computer monitor.
3. Realizing the artistic intent, the artist can apply new touches, while maintaining each option as a separate original. A digital image - a file in a specific storage medium - can be changed or modified at any time.
4. In digital painting, the concept of the geometric size of the work loses its meaning, since, in contrast to the clearly defined size of the stretcher in traditional painting, the digital artist builds the composition in relative terms.

Thus, the emergence and development of digital painting technology has had a strong influence on many areas of contemporary fine art. However, contemporary fine arts and technologies develop in conditions of mutual influence and interdependence. The dialectic of the development of culture and art stimulates the improvement and further development of digital technologies in artistic creativity and their software.

However, as noted above, digital art does not mean a complete rejection of traditional art techniques, methods, tools and materials - only the transformation of the artist's vision takes place, in view of the changed surrounding reality.

In October 2014, the English curator and gallery owner Kurt Beers, in collaboration with Thames & Hudson, published a voluminous book "100 Artists of Tomorrow", which tells about the most promising masters of the early 21st century. They were selected by a jury, which included prominent figures in the art world: Cecil Brown, Yuko Hasegawa, and Susan Hudson. Out of 4,300 artists from around the globe, 53 men and 47 women were selected. Any person who can draw could apply for the competition - without age and geographical restrictions. At the initiative of the organizers, several dozen of the world's leading art universities recommended their graduates.

As Kurt Beers points out, today painting is experiencing a significant upswing. Many leading artists are returning to this traditional way of expressing themselves after many years, when digital technologies played a central role in the world of visual art [20]. The publication "100 Artists of the Future" not only predicts interesting times for painting, it will also help to navigate the current tendencies, directions and main trends. Under a solid cover, reproductions of excellent quality show realistic, abstract and conceptual paintings, as well as installations and works made in mixed techniques.

One of the artists featured in this publication is the Lithuanian artist Kristina Alisauskaitė (1984). Her laconic paintings capture moments of life, moments of sadness and loneliness. Alisauskaitė creates disturbing images of emptiness - she places a person on a springboard, on the edge of the empty space of the picture; a figure without a face hangs in oblivion; if she depicts a table, then it is left unset (see Figure 1 below).



Figure 1. Kristina Alisauskaitė, *Don't ask II*, 2011, oil on canvas

Another artist, G. L. Brearley (1965), was born in the UK. This is the oldest of the artists whose names are included in the book. During his years on the international scene, he has participated in numerous solo exhibitions in Europe and the United States. The process of creating his neo-baroque, sculptural painting, in the artist's own words, is similar to "how you dress a doll". Thick strokes harden, forming folds, from which an object is formed that resembles a portrait, still life, or abstraction. Other easily recognizable materials peek out from under layers of paint: lace, fur, icing, wood, and sugar (see Figure 2 below).



Figure 2. G. L. Brearley, *Fud*, 2012, oil on canvas, 46 x 53 cm

Artist Andrew Sendor (1977), a graduate of the prestigious Pratt Institute in New York and the Department of Astronomy at Columbia University, balances between painting and photography in his hyper-realistic oil paintings, resorting to digital format, digitizing the image, using the mosaic effect, and thereby enriching both types of visual art. Imaginary installations in fictitious exhibitions include monochrome, usually black and white canvases, and sometimes jpg files (see Figure 3).

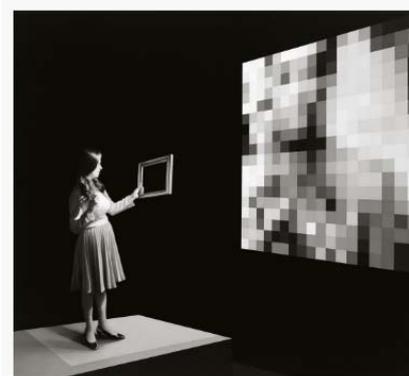


Figure 3. Andrew Sendor, installations: (left) "Performance with The Grand Master Cryptologist"; (right) "Onora Afua, Unthinkable", 2033, video projection, 52:55, 2012, oil on linen, 53.3 x 58.4 cm

Traditional art successfully absorbs new artistic materials. The technical basis of the work is changing. There is a revolution similar to the one that the Venetians made in the Renaissance, starting to use oil paints to create paintings. Derivatives of carbon materials are changing our world. Acrylic paints, polyester resins, and other synthesized media are just the beginning of the evolution of the spread of new art materials. Synthetics is the basis and further vector for the transformation of the surrounding space.

Of course, the computer becomes a full-fledged and main instrument of fine art. The driver for progress is the growth of new capabilities of digital equipment and the creation of more advanced software.

Various types of fine arts, due to individual specifics, are more or less receptive to new digital trends. The most mobile and rapidly evolving are those types of art that, when creating new works, are closely connected with technological processes.

The concept of “digital art” combines such types of artistic activity, the conceptual and productive base of which is determined by the computer environment. A new type of artistic activity is being actively discussed by specialists in a wide range of areas related to culture and art, as well as to science and technology. The advent of digital arts has led to the emergence of new artistic genres and forms. Areas such as 3D animation, virtual reality, interactive systems, and the Internet have found unprecedented creative possibilities. Already well-established art forms - cinema, 2D animation, video art, music - have also been strongly influenced by digital technologies, contributing to the creation of new genre subspecies.

Design, an applied art form that arose due to technological progress, was a catalyst accelerating the absorption of computer technology into the visual arts. Design has transformed the professional vision of the artist through the use of digital tools [17].

The advent of digital technologies at the end of the 20th century contributed to the birth of new forms of digital, computer, network, interactive arts. Under digital art (also computer art, digital art, multimedia art), art critics and artists understand creative activity based on the use of information (computer) technologies, the result of which are works in digital form or created initially using a computer, and fundamentally new types of artwork, the main environment of existence of which are computer and network platforms. The term refers to copyright works that are created, modified and presented using computer technology [15]. Digital art does not include traditional art that has been converted into digital form, which mimic its original physical medium, such as a scanned photograph, a digitized film, or computerized classical music. Such digitized works, however, can be included in the structure of artists' digital projects as a kind of “building blocks”, materials. Digital art can be interactive (interactive installations, network art, digital telecommunications projects), machine-generated (fractal, algorithmic art) or created by the author's hand, more precisely, using editing and vector graphics software (digital photography, digital painting, 3D art animation, etc.).

Already from the first steps of its formation since the early 1980s, digital art has been presented to artists, critics, and researchers as an advanced frontier in the aestheticization of human-machine communications, artificial intelligence, biotechnology, computer interfaces, computer virtual realities, etc. Artists have sought to update the language of art, having mastered the new possibilities of image virtualization, to comprehend new telecommunication and virtual spaces, while using available digital devices and technological innovations. In Western European art history, such artistic practices represent the so-called “digital aesthetics” [13].

A convincing example of the presentation of such a “new aesthetic” was the art exhibition “*Out of hand: materializing the post digital*”, held at the Museum of Art and Design in New York in October 2013 - June 2014. The exhibition featured interdisciplinary works created using hybrid virtual and material structures. The new post-digital aesthetics also manifests itself in other strategies of modern media artists. So artist Sterling Crispin presents the Data Masks project (launched in 2013), which demonstrates how digital devices “see” a person as a whole. Technically, the masks are generated using algorithms that analyze various photographs of faces and transform the 3D shape until it satisfies the requirements of the recognition program. The result is a rather strange mutation of images: the mask is made up of the faces of different people. Material and digital are interconnected.

“Post-digital aesthetics” is realized in the works of artists who want to return to the work communication with the physical processes of interaction with the work. The process nature of

post-digital practices, based on procedural techniques, is rarely aimed at updating the conceptual content or any particular author's idea. The result of the reception of a post-digital work can be a “product” with rather formal or non-specific qualities. Partially freed from the author's control, such a work shifts the main focus of attention to the processes of subjective perception; instead of conveying the subjective feelings of the author to the viewer (listener), the work stimulates the viewer's participation in the generation of own sensations. The artist sets a set of rules according to which the participant is invited to interact with the work.

As Ian Andrews points out in his study, “post-digital practices, instead of a techno-critical study of the transparency of media information flows (by interpreting the figurative features of works made in the “aesthetics of error”) and instead of updating the form of a work for aesthetic experience (the viewer), are aimed at changing the usual principles of artistic expression through an indication of the processes themselves (the reception of the work), which call into question the author's influence (on the viewer's experience)” [16].

The artist and digital art theorist Mark Tribe shows that post-digital art is not about brightly pixelated pictures or the demonstration of elements of digital code or computer-generated animation. Instead of demonstrating its technological specificity, post-digital art is aimed at organizing communication processes between people involved in interaction with the help of digital “matter” [25].

According to researcher and artist Maurizio Bolognini, artists use digital devices and programs to organize social relationships between participants. The so-called “generative art” techniques use software algorithms so that the artist can set the rules for the interaction between the user and the work, after which the work of the author can function without his direct participation.

Contemporary art is becoming increasingly more technological. According to British art historians, students of art colleges study the methods and technology of production to the same extent as students of polytechnic universities. In the opinion of these scientists, there is a widespread “involvement of science in art and the artist in science”. British art historians present the evolution from Dadaism to computer art as a radical revolution in contemporary Western art culture. This practice of technologization of fine arts is also considered in detail by American researchers J. Shipley and A. Weller in their work “*Modern American Painting and Sculpture*” (cited in Wang and Wang in 2021). According to them, “the new generation of artists has scientific and technological abilities that were so rare in art in the past”. Using many examples, these scientists showed that young artists have wide prospects and rapid success in solving the “man-machine” problem based on the cooperation of artists, physicists, chemists, and engineers [14].

While the artist of the classical type created his works alone, trying to throw out his experiences or his vision of certain metaphysical truths on the canvases, the artist of the cybernetic age becomes an organizer. “From a romantically inclined artist, intended to despise the vanity, the prose of life, moving away from it into the world of illusions and fantasies, the artist turns into an active organizer, establishes contacts with scientists and engineers, studies the market situation, looks for a customer, offering him his projects. The use of expensive equipment, the cost of scarce materials, and the rental of premises force these teams to create objects according to an agreed project, approved after careful expert assessments and conclusions. Such work on one or another material structure of the created sculptures and abstract structures in many cases makes it very problematic for artists to express themselves in these creations, which act as some kind of symbols of the power and wealth of monopolies, companies or banks, the main customers of such projects” [21].

A powerful leap in the development of computer technology and digital technologies has had an unprecedented impact on artistic culture in general, on all types of classical, traditional art, and stimulated the emergence of the newest hybrid varieties of art.

Fundamentally new types of digital art have emerged, not only new art languages are being formed, but also the artistic consciousness of the latest type, which has a direct impact on the concepts and practical implementation of all categories and areas of art of the 21st century.

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Secondary Paper Section: AJ, AL

INDIRECT AND DIRECT PEDAGOGICAL INTERACTION OF TEACHER WITH STUDENTS IN THE CONDITIONS OF ELECTRONIC LEARNING AND THEIR PERFORMANCE OF THE ROLES OF "E-TEACHER" AND "E-STUDENT"

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Abstract: The article presents the theoretical and empirical results of the study of the phenomenon "pedagogical interaction in e-learning". The direct pedagogical interaction of the e-teacher with e-students during e-learning was considered as mutual influence in the conditions of synchronous learning, and the indirect one – as mutual influence in the conditions of asynchronous learning. The pedagogical experiment was aimed at clarifying the attitude of various participants of the educational process, who perform the roles of e-teachers, e-students, e-teachers of elementary school, to direct and indirect pedagogical interaction during e-learning, which was organized both during the period of the spread of COVID-19 (I period), and during the introduction of martial law on the territory of Ukraine as a result of Russian invasion (II period). According to the results of the pedagogical experiment, during the spread of COVID-19, e-students in asynchronous learning conditions felt psychological discomfort due to the lack of direct pedagogical interaction with the teacher. Also, the students had a slowdown in the pace of study material, a loss of motivation to study was observed. They constantly felt the desire to postpone the study of the educational material for later. During the introduction of martial law on the territory of Ukraine, e-students preferred synchronous learning. The presence of direct pedagogical interaction with others ('electronic teacher' and 'electronic students') had a positive effect on the psychological state of students, helped to maintain the pace of learning, learn new educational material faster and more efficiently, experience positive emotions, a sense of security, etc.

Keywords: behaviorism; cognitivism; experientialism; connectivism; e-learning models; pedagogical interaction; roles during e-learning.

1 Introduction

Interaction determines the existence and structural organization of any material system. It also reflects the processes of influence of various objects on each other, characterizes their mutual conditioning and being in a direct or indirect, external or internal connection or relationship [6; 7].

The concept of "pedagogical interaction" is widespread in the education system. According to Z. Kovalchuk [17], pedagogical interaction is a social phenomenon that manifests itself in the interaction of two subcultures - the teacher's (primarily, in official and general pedagogical terms) and the student's. According to the scientist, pedagogical interaction should be considered as active interpersonal communicative and perceptive relations between the teacher and students, which contribute to the development of cognitive motivation, cause an increase in the activity of the subjects of interaction, determines the emergence of emotional well-being, etc.

T. Miyer [22] explains pedagogical interaction as a process of direct or indirect influence of the subjects of the educational process on each other, which creates a relationship between them and the causality of their actions. Pedagogical interaction is implemented with the dominance of the developmental strategy of pedagogical influence, it is built as a system of mutual influences that contribute to the personal development of each of the participants in the interaction, and is manifested in communication.

Pedagogical interaction is manifested in subject-subject relations between the teacher and the student, which alternately change the position of the communicator, who informs (acts), to the position of the recipient, who actively perceives information. In this way, there is a mutual exchange of verbal and non-verbal

signals; actions, operations, attitudes, emotional states, and conditions are created for the formation of individual experience based on the acquisition of new knowledge, skills, and abilities.

2 Materials and Methods

The construction of pedagogical interaction has certain features during the organization of e-learning, since the participants of the educational process have to perform new roles:

- In the absence of face-to-face communication [15],
- In the conditions of changes in social factors [25],
- With the use of various information and communication technologies, as well as computer, network, digital and specific mass media technologies, which provide the expansion of technological characteristics of information, communication technologies in the case of their use or are used as self-sufficient means (Fig. 1) [23].

It is about the roles of e-teacher, e-lecturer, e-student. Taking into account the above, the research was aimed at fulfilling the following tasks:

1. To investigate and summarize data on the peculiarities of the interaction of the teacher with students in various learning theories, in particular, in the theory of behaviorism, the theory of cognitivism, the theory of experientialism, the theory of connectivism, the theory of the adoption of information and communication technologies, the theory of the e-learning model within the framework of education for sustainable development.
2. To formulate the definition of the terms "direct pedagogical interaction during e-learning" and "mediated pedagogical interaction during e-learning" based on their correlation with synchronous and asynchronous learning, respectively.
3. To analyze scientific works and summarize data on the advantages and disadvantages of direct and indirect pedagogical interaction of 'electronic teacher' with 'electronic students' in the conditions of e-learning.
4. To conduct a pedagogical experiment to clarify and generalize data on the attitude of participants in the educational process (electronic lecturer, electronic students, electronic primary school teacher) to direct and indirect pedagogical interaction during e-learning organized in the time of the spread of COVID-19 (I period) and during the introduction of martial law on the territory of Ukraine as a result of the aggressive and criminal actions of Russia as an aggressor country (II period).

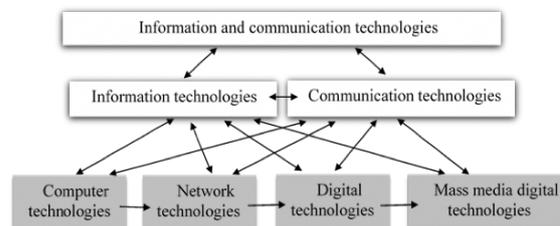


Figure 1. An essence of information and communication technologies [23]

Various methods were used in the research: theoretical (analysis, arrangement, systematization, generalization) and empirical (observation, questionnaires, interviews). The pedagogical experiment involved 16 lecturers and 350 students of the Faculty of Pedagogical Education of the Borys Grinchenko Kyiv University (Ukraine), as well as 12 lecturers of the Municipal Institution "Kirovograd Regional In-Service Teacher Training Institute named after Vasyl Sukhomlynsky" (Ukraine) and 240

primary school teachers who studied on advanced training courses.

3 Results and Discussion

Analysis of theories of learning in the context of teacher interaction with students

According to the theory of behaviorism [30; 32] the interaction of the one who teaches (the teacher, lecturer; hereinafter – the teacher) with those who study (pupils, students, teachers in post-graduate pedagogical education institutions (hereinafter – the students), is built on the basis of imitating the actions of the former, involves external motivation to training, passive assimilation of a certain amount of knowledge. In the process of interaction, considerable attention is paid to repetition, which, in turn, contributes to the consolidation of the student's correct behavioral reactions to a certain educational content, since the knowledge he has learned determines the repertoire of behavioral reactions to the stimuli of the educational environment.

In the theory of cognitivism, the teacher's interaction with students acquires other characteristics. The interaction unfolds in an educational environment, in which conditions are specially created for the discovery of subjectively new knowledge by students and their active assimilation and conscious inclusion in pre-existing knowledge structures [30]. The teacher's interaction with the students is aimed at promoting the active acquisition of knowledge, is built on the students' internal motivation for their acquisition, and involves the formulation of the goal of the educational activity by each student. According to the theory of cognitivism, interaction is organized on the basis of the teacher's use of various cognitive strategies, in particular, the schematization of learning, analogical reasoning, algorithmic problem solving, the introduction of classifications [4], and the use of digital tools.

According to the theory of constructivism, students actively construct an idea of reality, connecting new information with the knowledge they have learned before [8]. To facilitate the process of construction, the interaction of the teacher with students is organized in accordance with the principles (the principle of spatial contiguity, the principle of coherence, the principle of modality and the principle of redundancy to strengthen the learning process) and constructivist strategies (situational learning to solve heuristic problems, cognitive learning based on personal choice, social negotiations for monitoring the researched processes) [4]. The process of interaction is organized by the teacher using information resources, cognitive tools, tools for activating communication and interaction, social (contextual) support and involves the use of multimedia, virtual reality (VR), etc. [18]. The act of interaction during education focuses on social situations, which directly affect students, their motivation and everyday life [34].

The basis of the theory of experientialism provides for the observance of the cycle of stages of experience (stage of concrete experience; stage of observation, reflection and abstract conceptualization; stage of testing in new situations). The teacher's interaction with students is aimed at creating conditions for active formation of personal experience by students. The teacher-facilitator directs the interaction and motives of students to the successful completion of all stages of the educational cycle [16].

The basis of the theory of connectivism is conveyed by the thesis "a person learns throughout his life". In accordance with his cognitive requests, an individual seeks to acquire new knowledge, form new professional skills, obtain the necessary experience as a result of: interaction with the teacher; it also implies obtaining access to the necessary information on the use of VR technologies [31]. Having gained access to the necessary information, a person simultaneously performs various functions, including educating himself, with the involvement of previously analyzed information and selected necessary data.

A certain level of development of society is reflected in a certain theory of the construction of the educational process and the interaction of the teacher with students. The education of the digital and network society takes place in new, timeless and boundless web spaces, based on new learning models, forms, methods, means and virtual educational environments that are constantly changing. Both the teacher and the student in timeless and boundless web spaces perform other roles, namely: the role of an electronic teacher and the role of an electronic student. In these roles, they interact with each other differently, perceive the educational process in e-learning, perform tasks, and understand the learning outcomes.

It is worth noting that e-learning as a basis for the deployment of teacher-student interaction is also undergoing changes. There has been a radical change in the teachers' and students' understanding of the e-learning essence. Their attitude towards e-learning as a modern method, means and form of education, organized on the basis of interaction of participants in the educational process, preceded the attitude towards e-learning as an online folder used to store educational materials.

In Table 1, we organized the definitions of the concept of "e-learning" proposed by various scientists and analyzed their content in the context of the presence/absence of a direct or indirect indication of the interaction of participants in the educational process.

Table 1: The presence / absence of a direct or indirect reference to the interaction of the teacher with students in the content of the definitions of the concept of "e-learning"

Year	Author / source	Contents of the definition of the concept of "e-learning"	Instruction on teacher interaction with student
2002	M. Paulsen [26]	an interactive learning method in which learning content is delivered online	indirect – through the use of the term "interactive"
2006	R. Mason & F. Rennie [21]	a strategic way of lifelong learning and an effective way of spreading higher education	indirect – through the use of the terms "method of learning" and "higher education"
2010	P. Resta & M. Patru [27]	a teaching method that uses online communication through interaction between teachers and students with appropriately designed learning materials and content	direct
2014	D. Nguyen & T. Nguyen [24]	an online learning method for some formal education programs managed by a learning management system (LMS) to enable interaction, collaboration, and meeting the learning needs of learners anywhere, anytime	direct
2016	E. Masie [20]	a learning process that is prepared, delivered, and managed using various ICT tools locally or globally	indirect – through the use of the terms "prepared" and "managed"

The analysis of the data in Table 1 proves that during the 21st century, scientists revealed the essence of the concept of "e-learning" and directly or indirectly indicated the interaction of the teacher with students. Our study was aimed at identifying the advantages and disadvantages of the teacher's interaction with students in the e-learning environment.

Potentially the most effective are three styles of e-learning [10]: 1) exercises with automatic and appropriate feedback; 2) a combination of independent study and joint study; 3) use simulation to improve skills.

The theory of adoption of information and communication technologies explains the teacher's attitude to the use of information and communication technologies as a result of establishing the following causal relationships: antecedents - beliefs - attitudes - behavioral intentions - actual behavior in the organizational context [35].

In the study [10] it was established that the motivation for technology adoption mediates the following relationships:

- constructivist beliefs – behavioral intentions;
- subjective norms - behavioral intentions;
- technological complexity – behavioral intentions;
- technological complexity – perceived ease of use;
- subjective norms - perceived usefulness.

It was also established that among university teachers the following is observed [10]: 1) motivation to use tools is positively related to the perceived usefulness of the e-learning system; 2) motivation to use the tools is positively related to the ease of use of the e-learning system; 3) motivation to use tools is positively related to behavioral intentions in the e-learning system. That is, ICT adoption motivation has a positive effect on perceived usefulness, perceived ease of use, and behavioral intentions, suggesting that university teachers who are aware of their motivations tend to view e-learning systems as worthwhile and easy to use. Perceived usefulness measures the educator's subjective opinion about whether information systems will improve learning effectiveness. Perceived ease of use measures the degree to which the teacher and students believe that the implementation of information systems will be effortless. Both belief variables directly influence attitudes, and attitudes, in turn, influence teacher and student behavioral intentions.

Among university teachers, subjective norms are positively related to the motivation to instrumental use of the e-learning system and to behavioral intentions in the e-learning system. That is, subjective norms regarding the use of the e-learning system have a positive effect on the behavioral intentions of university teachers and on their introduction of e-learning in their educational practice [10].

The theory of e-learning model for sustainable development [36] consists of seven successive levels of professional and personal development and is conceptually related to self-regulation strategies and motivation. We summarized the work of the authors in Table 2.

Table 2: E-learning model theory in the interests of sustainable development (compiled by us on the basis of research [36])

Level models	Resource	Purpose of the resource
Goal setting	FORGE	allows students to set their own goals by choosing their own learning resources and programs
	MyLearning Mentor	offers students an interface to set their own goals for each week
	eLDA	allows students to set their own learning trajectories by choosing learning material
Self-esteem	FORGE, The Serious Game	allow students to review the assessment of their acquired knowledge by performing course assessment activities
	Learning Tracker, eLDA	offer visualization of student progress throughout the course
Seeking help	eLDA, Video- Mapper, MyLearning Mentor	include a chat room where classmates can exchange ideas and find solutions needed for further learning
	eLDA, Video- Mapper	include chat and discussion forums
Self-motivation	FORGE, The Serious Game	support self-motivation through interactive activities (labs, interactive assessment)
	eLDA	allows students to choose the

		most appropriate material
Strategic management	MyLearning Mentor	allows students to choose the most appropriate material
	eLDA	allows students to determine their own learning path
Consciousness	Learning Tracker	offers students visualization so they can view and monitor their progress in the course
Organization	Video- Mapper	supports the organization of learning process by offering students the ability to take notes during video lectures

According to the work of the authors of the e-learning model within the framework of education for sustainable development, progress in e-learning motivation goes through six stages. This is sparking interest, moving from interest to desire, getting inspired and active, self-improvement in establishing social contacts, achieving balance in e-learning and obtaining innovative results. For the development of social interaction, it is advisable to involve students in the role of moderator, consultant, or mentor and in role-playing games in the e-learning environment [36].

During the study of definitions of the concept of "e-learning", analysis of theories of learning, theories of adoption of information and communication technologies, models of e-learning for professional and personal development, we paid attention to the presence or absence of terms that would directly or indirectly indicate the interaction of participants in the educational process within e-learning. For the purpose of researching the advantages and disadvantages of interaction between a teacher and students in the conditions of e-learning, we singled out two ways of pedagogical interaction:

- Direct pedagogical interaction during e-learning (organized during synchronous learning);
- Mediated pedagogical interaction during e-learning (refers to asynchronous learning).

Advantages and disadvantages of direct and indirect interaction of the teacher with students in the conditions of e-learning

E-learning is organized in innovative learning environments, access to which is provided by the use of the Internet network. Unlike face-to-face interaction [15], interaction in these environments can be organized as:

- Direct pedagogical interaction in e-learning - it involves the mutual influence of e-learning participants on each other, which takes place at a clearly defined time, which is recorded in the class schedule, does not depend on the physical location of the teacher and students, but involves their presence in the class in the role e-teacher and e-students;
- Indirect pedagogical interaction in e-learning – it involves the impact on electronic students of the content of educational materials that are developed in advance by the teacher and placed in the educational environment of e-learning, the performance of the role of an electronic teacher is not foreseen.

Each of these methods of interaction has its advantages and disadvantages. Let us consider them.

During e-learning, direct interaction in innovative learning environments, which are pre-created on the web, can take place regardless of the physical location of the teacher and student. Instead, during mediated interaction, an electronic student is given the opportunity to learn at his own pace, without time and space limitations [2].

Despite these advantages, mediated electronic interaction has significant disadvantages, as it can cause a high probability of the mental workload in electronic students as a difference

between cognitive abilities and the requirements necessary to perform work [11].

A question arises. Under what conditions of direct and mediated electronic interaction the mental workload of electronic students occurs? After all, during direct interaction, a teacher guides the cognitive activity of electronic students, and during mediated electronic interaction, he determines the content of the educational material in advance, presents it in a logical sequence, divides it into logically complete parts, develops accompanying materials (presentation, schemes, tables, drawings, diagrams, etc.).

The analysis of the results of scientific research revealed that electronic interaction during e-learning can cause the mental workload of electronic students under various conditions, namely when:

1. E-learning requires e-students to have a high or sufficient level of skills that are necessary for the active activity of e-student in the educational environment of e-learning, in particular, such skills as:

- Ability to work with high-tech equipment. According to the results of the research of scientists [12], if these skills are formed at a low or medium level, there is a high probability of an increase of the mental workload in the electronic student, as a difference between cognitive abilities and the requirements necessary to perform the work [13].
- Ability to work with IR technologies. To organize mediated electronic interaction, the teacher uses information delivery technologies, which, in terms of intellectual and time costs for obtaining it, significantly reduce the intellectual potential of the electronic student, which was supposed to be directed to processing the content of information [28]).
- Ability to manage study time without outside help and the ability to manage own learning rhythms. If these skills are not developed, e-students will feel time pressure, which, in turn, will create conditions for the mental workload [33].
- Ability to separate basic and auxiliary information. During mediated electronic interaction, e-students perceive the educational material as a whole, do not distinguish between the main information and the auxiliary information that clarifies or explains the main content, and, therefore, try to process all the material with the same intensity. In the conditions of direct electronic interaction, the work with the educational material is directed by the e-teacher. He makes appropriate accents while working with the content of the material, which, in turn, prevents the mental workload of e-students [19].

2. It is difficult for e-students to learn in a self-disciplined way, in which case mediated interaction causes the mental workload [34].

3. E-students lack motivation for instrumental use. According to research results [9], motivated students, as a rule, have a higher level of readiness to use various technologies to meet their educational needs. If e-students lack the motivation to use tools or they have partially mastered the technology that the teacher uses to organize mediated electronic interaction, or students do not have enough technical capabilities to use these technologies, then under such conditions the vast majority of e-students will experience excessive mental workload (according to the results of research [2]).

4. E-students perceive the educational system as complex and confusing. In this case, they cannot assess the potential benefits of combining the learning material with the technologies that the teacher has developed. According to the results of a study by scientists [14], perceived difficulties are negatively related to the effectiveness of interaction during e-learning and to productivity.

5. The organization of mediated electronic interaction can be designed by a teacher with an emphasis on teaching (that is, on

the transfer of information and structured knowledge to electronic students) and on the process of student learning (that is, it contains methodical support to independent work of students). According to the results of the study [29], it is important to project the mediated interaction in e-learning with an emphasis on both imaginary teaching and the real process of electronic students' learning.

6. The organization of mediated interaction in e-learning can make e-students 'sleepy'. According to the results of the study [5], drowsiness occurs as a result of the lack of face-to-face communication.

7. The organization of mediated interaction in e-learning is carried out without taking into account the type of student's education by the teacher. Special attention should be paid to students who show poor progress during e-learning. According to the results of the study [34], the practice of sending e-mails before the start of classes with the encouragement of students who demonstrate slow progress during e-learning is positive; also, involvement of mentors in observing these students to provide them with the necessary advice is expedient, as well as sending encouraging emails to students who are showing slow progress.

We supplemented the theoretical generalizations on the problem of organizing direct and indirect interaction of teachers with students in e-learning with experimental data. The pedagogical experiment involved 16 lecturers and 350 students of the Faculty of Pedagogical Education of the Borys Grinchenko Kyiv University (Ukraine), as well as 12 lecturers of the Municipal Institution "Kirovograd Regional In-Service Teacher Training Institute named after Vasyl Sukhomlynsky" (Ukraine) and 240 primary school teachers who studied on advanced training courses.

The pedagogical experiment covered 2 periods. The first period was the period of spread of COVID-19 (2019-2021 years); II period was the period of introduction of martial law on the territory of Ukraine. During these two periods, blended learning was replaced by e-learning to continue learning, first in the conditions of self-isolation caused by the global spread of COVID-19, and from February 24, 2022 - in the conditions of the aggressive and criminal actions of Russia as an aggressor country. It should be added that before the beginning of the pedagogical experiment in the educational institutions mentioned above, e-learning was implemented as a component of blended learning, that is, it was a typical phenomenon for educational practice.

During the first period, the respondents' intellectual efforts were aimed at adapting to the conditions of end-to-end implementation of e-learning. Adaptation to new learning conditions affected the respondents' activity. The activity of teachers, first of all, was aimed at solving various aspects of e-learning, in particular: organizational and technical (72% of respondents-teachers expressed interest in mastering new IC technologies); content (84% of respondents-teachers pointed to supplementing electronic courses with methodical support to facilitate independent work of students, as the number of students studying asynchronously increased).

The analysis of the questionnaires of student respondents who studied in the asynchronous mode proved the presence of advantages:

- The ability to choose the time for studying (98% of student respondents) and the pace of studying educational material (86% of student respondents);
- The opportunity to save travel time, absence of travel and accommodation expenses (94% of student respondents);
- The opportunity to use various IC technologies to interact with the teacher and other students (88% of student respondents);
- The opportunity to combine study and work (82% of student respondents);

- The possibility to study from any corner of the world (city, village in Ukraine, from another country) (82% of student respondents);
- The possibility of studying in the conditions of the introduction of martial law, the spread of any pandemics, self-isolation, deterioration of health (81% of student respondents);
- The opportunity to participate in various conferences, seminars, lectures, webinars in the country and abroad (68% of student respondents);
- The opportunity to organize individual work and work in pairs and groups (62% of student respondents);
- The possibility of transparent electronic assessment (51% of student respondents);
- The opportunity to organize work based on shared Google documents (48% of student respondents);
- The possibility of repeatedly listening to recordings of teachers' lectures and re-reading the content of educational materials (21% of student respondents)).

The analysis of the questionnaires of the student respondents who studied in the asynchronous mode showed the presence of shortcomings:

- 92% of student respondents experienced psychological discomfort due to the lack of direct interaction with the teacher;
- 67% of student respondents pointed to hypodynamia;
- 46% of student respondents indicated problems with the technical condition of gadgets, outdated software, sound, video image;
- 31% of student respondents pointed to a slowdown in the pace of studying material;
- 23% of student respondents indicated an insufficient level of self-organization development;
- 18% of student respondents indicated a worsening of posture;
- 12% of student respondents felt a loss of motivation to study;
- 11% of student respondents testified about the low provision of computer equipment (one computer both for the work of the parents, and for the study of the student, and for the study of brothers and/or sisters);
- 8% of student respondents made a willful effort to overcome the desire to postpone the study of educational material for later;
- 3% of the student respondents indicated a deterioration of vision (a lot of time must be spent at the computer, preparing for classes, performing various tasks and during e-learning);
- 3% indicated that it was difficult to develop practical skills or abilities.

During the second period (the period of the introduction of martial law on the territory of Ukraine), the intellectual efforts of the respondents-teachers were aimed, first of all, at maintaining the psychological state of students in the conditions of both synchronous and asynchronous learning (telephone communication, individual and group web meetings, SMS messages, web counseling, recording of classes held in synchronous mode).

The analysis of the questionnaires of respondent lecturers and teacher respondents who combined e-learning with advanced training courses proved that teachers, performing their professional duties, first of all found out the geographical location of students; the conditions in which they were; availability of devices for e-learning, Internet access, stable connection, notebook, pen, textbook, etc. During the organization of e-learning, special attention was paid to the selection of tasks, their number, methods of motivating students, exercises on concentration of attention, stimulating assessment, implementation of an individual approach (since the possibility of learning in synchronous mode appeared only in the presence of electricity supply, Internet communication, working device, etc.).

During direct interaction, teachers first of all paid attention to the psychological state of students (if necessary, they provided psychological support; provided exercises for psychological relief; used techniques for regulating the emotional state; allocated more time to collective performance of exercises and tasks. E-teachers informed the students that the "air alarm" signal had been announced and reminded them of the actions in this case.

Based on the analysis of questionnaires of student respondents, it was established that during the introduction of martial law on the territory of Ukraine, students were most worried when could not join the synchronous e-learning and interact directly with the e-teacher and e-students. This was due to the conduct of hostilities in the territory of their residence, constant "air alarm" signals, lack of electricity supply and communication. It is significant that in 96% of student respondents, the need to study educational material in interaction with an electronic teacher and electronic students is constantly felt: 78% of student respondents noted that interaction during study helped them overcome anxiety caused by military actions, maintain the pace of study, learn new educational material faster and more effectively, and experience positive emotions. All student respondents noted that they dream of live communication with the teacher and fellow students.

4 Conclusion

I. On the basis of the analysis of learning theories in the context of interaction between the teacher and students, it was established that the interaction between the teacher and students is built on the basis of:

- Imitation of the teacher's actions (according to the theory of behaviorism [30, 32]);
- Internal motivation of students to acquire knowledge; it involves formulating the goal of educational activity by them (according to the theory of cognitivism [4, 30]);
- Creation of conditions for active formation of personal experience by students (according to the theory of experientialism by Kolb) [16];
- Cognitive inquiries, aimed at mastering new knowledge, skills and acquiring the necessary experience (according to the theory of connectivism (G. Siemens [31]));
- The adoption of information and communication technologies and their use for the organization of interaction is explained by the following causal relationships: antecedents - beliefs - attitudes - behavioral intentions - actual behavior in the organizational context (according to the theory of adoption of information and communication technologies by Venkatesh & Davis (2000) [35]);
- Promoting progress in e-learning motivation through six stages (igniting interest, transitioning from interest to desire, gaining inspiration and activity, self-improvement in establishing social contacts, achieving balance in e-learning and obtaining innovative results (according to the theory of the e-learning model within the framework of education for sustainable development [36]).

II. We formulated the following definitions:

- Direct pedagogical interaction in e-learning - it involves the mutual influence of e-learning participants on each other, which takes place at a clearly defined time, that is recorded in the class schedule, does not depend on the physical location of the teacher and students, but involves their presence in the class in the role e-teacher and e-students;
- Indirect pedagogical interaction in e-learning – it involves the impact on electronic students of the content of educational materials that are developed in advance by the teacher and placed in the educational environment of e-learning; the performance of the role of an electronic teacher is not foreseen.

III. As a result of the analysis of scientific works, the following were identified:

1. The advantages of direct and indirect interaction between the teacher and students in e-learning conditions (building direct interaction in e-learning is carried out regardless of the physical location of the teacher and student; building indirect interaction in e-learning is carried at one's own pace, without time and space limitations [3].

2. Disadvantages of direct and indirect interaction of the teacher with students in the conditions of e-learning can be briefly summarized as follows:

3. There is a high probability of the mental workload in electronic students when:

- Skills are formed at a low level (in particular, ability to work with high-tech equipment such as specialized software [12]; the ability to work with ICT technologies [28]; the ability to manage one's learning time without external assistance and to manage own learning rhythms [33]); the ability to separate main and auxiliary information [19];
- It is difficult for students to study in a self-disciplined way [34];
- Students lack motivation for instrumental use [9];
- E-students perceive the educational system as complex and confusing [14];
- The teacher projects mediated interaction in e-learning with an emphasis on teaching (i.e., on the transfer of information and structured knowledge to electronic students), and pays insufficient attention to the process of student learning (i.e., does not add methodical support for the organization of students' independent work) [34];
- Indirect pedagogical interaction in e-learning can cause sleepiness in electronic students, which occurs as a result of the lack of face-to-face communication [4];
- Indirect pedagogical interaction in e-learning is organized without due attention to students who demonstrate low progress during e-learning (according to Sugawara et al. [34]).

IV. As a result of the analysis of the data of the pedagogical experiment, we formulated the following conclusions:

1. During the period of the spread of COVID-19 (2019-2021), the transition from blended learning to e-learning affected the activities of teachers. They responded to the identified opportunity for students to study asynchronously by developing additional methodical support (presentations, video lectures, workbooks summarizing the educational material in diagrams, tables, and matrices) to support students' independent processing of the educational material. Therefore, during the period of the spread of COVID-19 (years of 2019-2021), teachers paid considerable attention to the organization of mediated electronic interaction with students.
2. During the period of the spread of COVID-19 (2019-2021 years), almost all students who switched to asynchronous e-learning for good reasons or did it from time-to-time experienced psychological discomfort due to the lack of indirect pedagogical interaction in e-learning; a third of them slowed down development of educational material; one-tenth of the students felt a loss of motivation to study and constantly overcame the desire to postpone the study of the educational material for later.
3. During the introduction of martial law on the territory of Ukraine, the intellectual efforts of the respondents-teachers were aimed, first of all, at adapting the content and process of synchronous and asynchronous learning to the new conditions of organizing interaction with students, paying attention to the conditions in which they study, balancing their psychological state, change in methods of motivation, evaluation, 'shaping' meaningfulness of interaction, and implementation of an individual approach.
4. During the introduction of martial law on the territory of Ukraine, student respondents began to prefer synchronous learning. They attributed the presence of interaction with an

electronic teacher and electronic students, maintaining the pace of learning, faster and more efficient assimilation of new educational material, experiencing positive emotions to the advantages of such training.

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EDUCATION AS AN OPEN SYSTEM AND EDUCATION AS A PROCESS OF ORGANIZING E-LEARNING IN THE ONLINE SPACE IN THE CONTEXT OF A VARIABLE DEFINITION OF THE PHENOMENON “QUALITY”

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Abstract: The article presents the theoretical and empirical results of the study of variability of the “quality” phenomenon definitions. This is an understanding of the essence of quality as: the achievement of certain perfection (excellence) in education, educational process, results; ensuring efficiency, which is established on the basis of comparison of training results with costs; achieving the degree of compliance of the provided educational services with the requirements of the recipients of educational services; introducing changes that lead to the achievement of excellence or efficiency in education, educational process, results. The following was analyzed: 1) education as an open system functioning in the environment of other systems (the definition of the “quality” phenomenon was chosen for analysis as the introduction of changes that lead to the achievement of excellence or efficiency in education); 2) education as an open system, separated from other systems as a whole structure, the components of which are pedagogical systems (for analysis, such a definition of the phenomenon “quality” was chosen as ensuring efficiency, which is established on the basis of comparing the results of training with costs (time, mental, emotional, material, technological, technical)); 3) education as a process of organizing e-learning in the online space. The pedagogical experiment was carried out in order to find out the attitude of those who study to learning in the online space, distinguishing between the online space of e-learning and the real space of classroom learning, which attract the attention of those who study, as well as identifying the opinions of learners about the quality indicators that the online e-learning space should meet. Master’s students of Borys Grinchenko Kyiv University, Kherson State University, Ivan Franko National University of Lviv and teachers who studied advanced training courses at the Municipal Institution “Kirovograd Regional IN-Service Teacher Training Institute named after Vasyl Sukhomlynsky” were involved in the pedagogical experiment.

Keywords: education; education as an open system; online space; e-learning; quality; educational services; students; lecturers; teachers.

1 Introduction

Education is a multifaceted concept. This concept can refer to the following:

- Sociocultural institute (in the sense of specially organized targeted socialization and inculturation of individuals);
- System (in the sense of a system of educational (state and non-state) institutions of different levels and profiles, interconnected in a single, integral set);
- Process (in the sense of the integral unity of education, upbringing, development, self-development of the individual, preservation of cultural norms with an orientation to the future state of culture, creation of conditions for the full realization of the internal potential of the individual and his formation as an integrated member of society, and performing the function of ensuring the succession of generations);
- Result (in the sense of the final result of learning at each level of education, a fixed fact generating all values by the state, society and individual in the process of social activity).

This article presents the results of research on education broader - in the sense of an open system and the process of organizing e-learning in the online space.

2 Materials and Methods

The formation and development of digital civilization, the development and improvement of digital technologies contributed to the formation of the world educational space, the improvement of the education systems of various states, the organization of education using online spaces, etc. Of course, each country has its own experience in the development of education, but the vision of this development through the prism of quality is common.

Taking into account the qualitative aspect of the organization of training in the online space and the determining role of education in the socio-economic development of countries, the theoretical part of the study was aimed at the following tasks:

1. To investigate and summarize data on the variability of definitions of the phenomenon “quality”.
2. To analyze education as an open system in the context of variable definitions of the “quality” phenomenon.
3. To analyze education as a process of organizing e-learning in the online space, taking into account variable definitions of the “quality” phenomenon.

The experimental part of the study was aimed at performing the following tasks:

1. To find out the attitude of students to studying in the online space.
2. To establish the differences between the online space of e-learning and the real space of classroom learning, which attract the attention of students.
3. To identify the considerations of those who study, regarding the quality indicators that the online e-learning space should meet.

The research used theoretical methods (analysis, ordering, systematization, generalization) and empirical methods (observation in the online space of e-learning, questionnaires, conversations). Master’s students of Borys Grinchenko Kyiv University, Kherson State University, Ivan Franko National University of Lviv, a total of 950 full-time and part-time students (hereinafter we will use the term “master’s students”) and teachers who studied at advanced training courses were involved in the pedagogical experiment conducted in municipal Institution “Kirovograd Regional IN-Service Teacher Training Institute named after Vasyl Sukhomlynsky”, numbering 200 people (hereinafter - student-teachers).

3 Results and Discussion

Variability of definitions of the phenomenon “quality”

The phenomenon “quality” denotes the presence of essential signs, properties, features that distinguish one object from another, as well as the degree of cost, value, suitability of something for its intended use [9]. The use of the term “quality” in relation to education indicates a certain balanced compliance of a specific educational level with numerous needs, goals, conditions, approved educational norms and standards, which is established to identify the causes of violations of this compliance and manage the process of improving the established quality [15]. It can also refer to:

- Achievement of certain perfection (excellence) in education, educational process, results [11, 20];
- Ensuring efficiency, which is established on the basis of comparison of training results with costs (time, mental, emotional, material, technological, technical) [5];
- Achieving the degree of compliance of the provided educational services with the requirements of the recipients of educational services [24];

- Introduction of changes that lead to the achievement of excellence or efficiency in education, educational process, results [5];
- Fulfillment of the requirements for the implementation of the educational process and its results, which are determined by interested parties (stakeholders) taking into account internal and external conditions [6].

There are two approaches to defining the essence of the concept of “quality of education” [15]:

- Normative (satisfaction of needs and achievement of certain norms, standards, goals (individuals, society, state), which are normatively approved by relevant documents);
- Managerial (an object of managerial influence, which is simultaneously considered from the positions of: the quality of the education system; the quality of the educational process (the process of provided educational services); the quality of the personality of the graduate as a result of the activity of the educational system according to the indicators of his education and the formation of socially significant values).

The quality of education as an object of management is one of the most important indicators by which, in international practice, it is customary to determine the effectiveness of the education system of any state and the effectiveness of its management.

A. Szopa [30] singles out the following features of the quality of education: 1) uniqueness (implementation of strategic goals and organization of the process, which distinguish the institution from other educational institutions); 2) excellence (constant improvement of the qualifications of teaching staff, improvement of teaching methods and forms, approaches to assessment, modernization of educational programs); 3) fulfillment of declared functions (satisfaction of educational expectations of interested parties); 4) effective activity (ratio of costs and investments); 5) transformation (introduction of changes that contribute to the improvement of the quality of educational services provision).

The quality of the provision of educational services is considered, in particular, in the context of the economy. Education is a specific field of activity, and educational services are a public good with consumer value (Biliakovska, O. (2018) [2]). Also, the educational service is considered as a specific product, which is a set of educational and scientific information that is transferred to the student in the form of a system of knowledge and practical abilities and skills. If they are successfully mastered, the student receives the appropriate qualification [34].

In general, the quality of educational services is explained by scientists as:

- A set of relevant features and characteristics that are decisive in the ability to satisfy real and expected requests and needs of participants in the educational process [14];
- The degree of satisfaction of students' needs and requests, which is ensured by the didactic and post-didactic activities of the educational institution [22].

As a result of the analysis of variable definitions of the “quality” phenomenon, some of them were singled out, which served as the basis for the analysis of the works of scientists and the conduct of a pedagogical experiment. These are the following variable definitions of the phenomenon “quality”:

- Achievement of certain perfection (excellence) in education, educational process, results [11, 20];
- Ensuring efficiency, which is established on the basis of comparison of learning results with costs (time, mental, emotional, material, technological, technical) [5];
- Achieving the degree of compliance of the provided educational services with the requirements of the recipients of educational services [25];

- Introduction of changes that cause the achievement of excellence or efficiency in education, educational process, and results [5].

Education as an open system: analysis in the context of variable definitions of the phenomenon “quality”

Education is an open system that simultaneously functions in the environment of other systems and is separated from them as a whole structure. According to I. Malafiiik [17], the presence of relationships with other systems is a necessary condition for preserving the essence and form of the system, which is created and functions to perform a clearly defined dominant function, by which it is distinguished from other systems.

Education as an open system functioning in the environment of other systems acquires the rank of an element of these systems. Between the elements of each of the systems, there are relationships and connections that are, according to Kovalchuk, (2016) [10], of the following nature: 1) objective (the system can be studied as a real object of the surrounding reality); 2) essential (existing relationships and connections form a system representation of the object); 3) having different levels and diverse (relations and connections ensure the functioning of the object as a system); 4) interdependent (relationships and connections ensure the existence of the system as a whole).

According to the results of the research of I. Malafiiik [16], the terms “elements” and “components” are used to denote the content components of the system when it comes to the analysis of the object at the subject-content level. However, a well-defined set of formants (from the Latin *formantis* – forming) is also characteristic of a complete system, which provide the system with stable architecture. The scientist refers to such formants:

1. Elements (components) of the system. The role of system elements is to be part of the whole and contribute to the creation of the whole. If a part does not contribute to the creation of the whole, then it simply falls out of this totality.
2. System-forming factor – determines the interaction of system elements, defines and forms their connections.
3. Elemental structure – expresses connections between elements, based on their content, nature, interaction, thus being the carrier of a system property.
4. Hierarchy level – defines the external space in which the system functions, the sphere of its external connections, the filling of this space.
5. Integrative (emergent) property of the system with its relational influence. The process of interaction of elements in each system is explained by the emergent property. An emergent (systemic) property is not inherent to individual elements of the system. This is a property of the entire system. Any element (component) of the system, when it interacts with other elements (components) of the system, it is no longer the element (component) that is in a free state, but it is already an element (component) of the system. An emergent (system) property changes an element (component) in the interests of the system itself.

Formants of the system, united according to a certain principle of subordination, form a functional and morphological model of the system. Each of the named formants has its own field of possibilities, which exerts a narrowly directed effect on all other formants.

In the context of the “quality” phenomenon (in the sense of the introduction of changes that lead to the achievement of excellence or efficiency in education), an emergent (systemic) property changes education as an element of the system “society - state - education - man-subject of economic life – production”. In one of our previous works, we define these changes as follows [18]:

1. Changes in the values of education as a basis for changing human roles in society and in production, which in genesis is reflected in the following sequence: a person in the sense of "labor force" → a person in the sense of "labor potential" → a person in the sense of "human capital".
2. Introduction of lifelong education to enrich the person-subject of economic life with new role expressions. An individual appears as a resource of the production system, as an object (subject) of management, and as a person. The consideration of the human subject of economic life as a resource of the production system actualizes issues related to the level of development of society and the state and factors causing further transformational processes in education for the development of citizens and production. The consideration of a person as a subject of economic life being an individual caused the processes that ensure the functioning of education throughout life.
3. Informatization of education as a result of the transition of the information society to a new level of development in the triad of genesis processes "initiation - formation - development". This new level of development of the information society is commonly referred to as the "knowledge society". The modern information society, enriched with the qualities of a knowledge society, is characterized by an accelerated increase in the volume of information in all areas of human activity without exception, and the growing role of computer communication. This, in turn, leads to the mediated global interaction of the inhabitants of the planet Earth, the global circulation of many information flows, and the availability of fast access to data on one's own request.

In the structure of education as a system, separated as an integral structure, the following are distinguished:

- Levels of education – a clear list of them is defined at the legislative level of each country;
- Various pedagogical systems that describe the structure, organization, main connections and relations regarding particular object of education – at the scientific and pedagogical level.

The components of pedagogical systems develop at different rates; therefore, they differ in quantitative and qualitative characteristics, as A. Kushnir stressed back in 1999 [12]. All pedagogical phenomena that occur in pedagogical systems have a logical explanation in the structural changes of the components of the pedagogical system, their qualities, and the nature of the connections between them.

Components of the pedagogical system that function successfully in some conditions may be ineffective in other conditions. The effectiveness of the functioning of the pedagogical system as a whole depends on optimization (that is, the degree of compliance with the goal for which the system was created). In turn, optimization achieved in some conditions may not occur in others [1].

In the context of the "quality" phenomenon (in the sense of ensuring efficiency, which is established on the basis of comparing learning results with costs (time, mental, emotional, material, technological, technical)), the development of a new pedagogical system is aimed at improving the quality of e-learning. As an example, we cite the following research results [29]. Scientists organized the process of improving the quality of e-learning in three stages:

The first stage is the planning stage. The team of teachers, in the process of discussion, developed the design of the lesson for the e-learning of students.

The II stage is the implementation stage. The lecturer organized training using the developed lesson design.

The third stage is the observation stage. The teaching team reflected on the obtained results in order to identify the weaknesses and strengths of the lesson design during the e-

learning of the students in order to further use the strengths and avoid the weaknesses.

The study of improving the quality of e-learning based on the identification of the strengths of the lesson design for e-learning contributed to the formulation of the following conclusion by scientists: the results of students' learning increase their reaction to good learning and to the learning atmosphere, which seemed very interesting to them.

In the context of the "quality" phenomenon (in the sense of the introduction of changes that lead to the achievement of the degree of compliance of the provided educational services with the requirements of the recipients of educational services), we will give an example of the development of another pedagogical system. This pedagogical system concerns the use of innovative e-learning tools (virtual laboratories, virtual reality, etc.) to meet the requirements (requests) of educational services recipients with high and lower levels of success [27] (Table 1).

Table 1: Improving the quality of e-learning based on taking into account the requests of students with high and lower levels of success (compiled on the basis of research by scientists [27])

Category of students	Characteristics of abilities
Highly effective	1) can develop complete, consistent mental models in various situations; 2) can find answers as a result of purposeful research and methodical implementation of multi-stage plans
Moderate performers	1) can control actions of medium complexity, but not always effectively; 2) can handle multiple situations or interrelated properties and manage change
Low effective	1) can determine whether or not one specific restriction is required; 2) partially describe a simple everyday topic

According to this pedagogical system, the introduction of changes that cause the degree of compliance of the provided educational services with the requirements (requests) of the recipients of educational services is determined by observing the five stages of the organization of e-learning based on requests [3, 26]:

Stage I is the stage of orientation and asking questions: the lecturer stimulates students to ask questions, define problems, and formulate ideas.

Stage II is the stage of generation and development of hypotheses: the lecturer directs students to formulate a hypothesis based on their own experience, the ideas formulated by them, taking into account the essence of the problem.

Stage III is the stage of planning and research: the lecturer directs students to plan the work process (order of actions, intermediate goals) taking into account the formulated hypothesis. Also, the emphasis is made on the implementation of the course of action, paying attention to the achievement of intermediate goals.

Stage IV is the stage of analysis and interpretation: the lecturer directs students to process the received data, identify key problems, carry out comparison of the methods of their solution proposed by students and described by experts, analysis of different points of view on problem solving.

Stage V is the stage of conclusion and evaluation: the lecturer directs students to reach a consensus regarding adequate ways to solve the problem, formulating conclusions.

Education as a process of organizing e-learning in the online space: Analysis in the context of variable definitions of the phenomenon "quality"

In the context of the "quality" phenomenon (in the sense of achieving the degree of compliance of the provided educational

services with the requirements of the recipients of educational services), education as a process of organizing e-learning must meet the following requirements of the recipients of educational services:

1. Educational services should be delivered in a flexible learning space that will allow students to access educational opportunities and continue to fulfill their various professional and family responsibilities [21].
2. The provision of educational services should ensure the acceptance of e-learning by students, which, in turn, is determined by the ease of use, the characteristics of the teacher, the quality of the e-learning system, available technical support, as well as the presence of advantages and usefulness of the training program, saving time, the availability of simple educational content corresponding to the tasks of the course [31].
3. The provision of educational services should be carried out as self-regulated learning of students, during which the lecturer only directs their actions in the direction of achieving educational goals. According to the results of research, self-regulation and intrinsic motivation correlate with less slowness during learning, greater efficiency and higher academic achievements [27].
4. The provision of educational services should be based on autonomy, which provides for: 1) choice (the student determines the time when to start and finish studies); 2) control (the lecturer detects, measures and evaluates the results of students' educational activities) [27].

In the context of the "quality" phenomenon (in the sense of ensuring efficiency, which is established on the basis of comparing learning results with costs (time, mental, emotional, material, technological, technical), education as a process of organizing e-learning should be carried out taking into account the following conclusions of scientists:

1. Technical factors (ease of use, flexibility, usefulness) and communication factors (student-student relationship, student-lecturer relationship, and student-non-teaching staff relationship) are significant predictors of student learning success (acquisition of knowledge and skills, persistence and self-efficacy). The student-lecturer relationship is the strongest predictor of a student's academic success. Building relationships with lecturers is critical to successful student learning in online programs that offer effective technology support, as Lee et al. note [13].
2. The results of e-learning compared to on-campus learning can be significantly lower if:
 - Online space is perceived as alien or even threatening for students [4, 32]; 32];
 - The student feels anxiety, frustration, and boredom arising as a result of the lack of a sense of belonging to the learning community; this feeling is especially acute in transitional periods and periods of change, in stressful situations, during learning in an unfamiliar environment, such as e-learning [29];
 - Students did not develop a sense of belonging, and, therefore, it will be difficult for them to complete the task [29].
3. E-learning results are significantly improved and student attrition rates are reduced if e-students develop a sense of belonging to the e-learning community. A sense of belonging has two dimensions: psychological (person's feeling that he is accepted, respected, valued in the classroom [7]) and social (connection to a group, class, department, subject, institution, or all of these [8]). The formation of students' sense of belonging to the educational community of e-learning is facilitated by the friendliness, willingness to help and enthusiasm of the teacher and the involvement of students in online discussions, organization of group work, availability of feedback, use of discussion

boards, organization of the work of discussion groups, joint online sessions, etc. [23].

4. E-learning outcomes are significantly improved when the feeling of isolation during e-learning is reduced as a result of engaging students in interaction and collaboration [33].
5. E-learning results are significantly improved with effective learning, which students associate with the presence of an enthusiastic e-lecturer [25].

In the context of the phenomenon of "quality" (in the sense of achieving certain perfection (excellence) in education, educational process, results [11, 20]); education as a process of organizing e-learning should be arranged taking into account the following achievements of scientists:

1. During the organization of learning, the emergence of a state of disequilibrium with a low level of mental activity (depression, fatigue, sadness, etc.) or a higher level (anxiety, etc.) should be prevented. The state of disequilibrium is characterized by a certain tension, uncomfortable experiences and a certain excess of energy. This state creates the focus of the student's consciousness (thinking) on a specific object, causes certain actions and deeds. Motivated actions of the student lead to interest in the content of the educational material, learning, and also contribute to the formation of new knowledge and skills. On the other hand, the intense, prolonged and unmotivated performance of educational activities with the simultaneous experience of "negatively" colored emotions not only complicates the formation of knowledge and skills, but also creates all the prerequisites for the most likely occurrence of the pre-sick conditions, which are characterized by a significant decrease in the body's functional reserves [19].
2. During the organization of training, the dynamics of students' working capacity should be taken into account, which is manifested in the successive change of such five stages as:
 - a) The stage of entry into work (the student's body prepares for mental load, its functional capabilities are mobilized, vegetative processes that provide the body's energy are strengthened. As a result, working capacity increases even before the beginning of educational work. A certain emotional background is added to work capacity in case of unpreparedness / readiness for work, unwanted activity / desired communication, previously experienced pleasant / unpleasant events, etc.);
 - b) The stage of relatively constant working capacity (gradual growth of the functional capabilities of the student's body, increasing the productivity of activities with simultaneous adaptation to the most economical mode of performance of actions). The duration of the stage depends on motivation (internal or external), the intensity of mental actions;
 - c) The stage of unstable work capacity as the norm of work capacity (the appearance of the first signs of fatigue is recorded). Work efficiency is maintained due to emotional and volitional stress and the use of compensatory mechanisms of the body, if students have internal motivation for cognitive activity in learning. There is a need to increase the time required for performance of the task);
 - d) The stage of a gradual decrease in working capacity (further development of fatigue and the appearance of overfatigue). Students can make mistakes even when performing simple tasks;
 - e) Stage of the final rush (it is fixed at the end of the performance of the educational activity, if the time of its completion is clearly defined). The level of work capacity increases due to emotional and volitional stress and the use of physiological reserves of the body. The feeling of fatigue manifests itself later in a more pronounced form [19].

The feeling of fatigue is intensified by experiencing states of dissatisfaction and depression in the case of informing students about a task for independent performance, which is perceived by

them as voluminous, complex, uninteresting and as having no practical significance.

Scientists [19] add that five stages of working capacity, of different durations, take place in the educational process: during one educational session (in lecture, seminar session, etc.), during one academic day, one semester, one academic year or period of study at a higher education institution. Taking into account the stages of the dynamics of working capacity during training will prevent the occurrence of pre-sick conditions in students.

Analysis of the results of a pedagogical experiment

The theoretical consideration of education as an open system and education as a process of organizing e-learning in the online space in the context of a variable definition of the phenomenon "quality" was supplemented with data from a pedagogical experiment. Master's students of Borys Grinchenko Kyiv University, Kherson State University, Ivan Franko National University of Lviv, of full-time and part-time forms of education, and student-teachers who studied at advanced training courses of the municipal Institution "Kirovograd Regional IN-Service Teacher Training Institute named after Vasyl Sukhomlynsky" took part in the experiment. If the description of the results of the pedagogical experiment is about both graduate students and teacher students, then we used the term "respondents" without specifying the category of students.

The experimental work was carried out in the conditions of e-learning of students as a dominant and accessible form of education in view of the introduction of self-isolation in connection with the pandemic processes in 2019-2021 and the threat to the lives of students during Russia's military operations on the territory of Ukraine, which began on February 24 in 2022.

The experimental work was aimed at clarifying the attitude of master's students and student teachers to learning in the online space, establishing the difference between the online space of e-learning and the real space of classroom learning, which attract the attention of master's students and teacher students, identifying quality indicators that, in their opinion, the online e-learning space should meet.

The analysis of experimental data proved that both master's students and student teachers treat online learning as:

- An effective way of organizing learning in conditions where the traditional way of learning in classrooms becomes impossible for various reasons (threats to health (indicated by 100% of respondents), threats to life (indicated by 100% of respondents), various diseases (35% of respondents); problems with by transport (27% of respondents));
- Opportunities for self-realization in new conditions (trying self in the online space (56% of respondents); feeling the influence of the online space (31% of respondents); preparing for effective modeling of student learning in the online space (19% of respondents);
- A challenge that needs to be overcome (7% of student teachers).

Master's students and teacher students pointed out the differences between the online space of e-learning and the real space of classroom learning. We organized the obtained data in Table 2.

Table 2: Differences between the online space of e-learning and the real space of classroom learning in the opinions of master's students and teacher students who studied at advanced training courses

The off-line space of classroom learning	The online space of e-learning
It surrounds the training participants from all sides	It is located in relation to each e-learning participant on the plane of the monitor, mobile phone or tablet screen, i.e., always

	in front
Students have the opportunity to choose a permanent place for studying in the classroom (closer to the lecturer, in the middle of the classroom, behind) or change it (at will)	The place on the plane of the monitor, mobile phone or tablet screen is variable and is determined by the student's speech activity
Each student has face-to-face visual contact with only a limited number of class participants. It is the lecturer and students who are close to each other in the classroom and can whisper to each other during the class	Each e-learning student makes visual contact with other participants (lecturer, master's students (teacher students)) in a face-to-face manner
Eye contact with a limited number of participants in the educational process does not lead to an increase in visual noise	Eye contact with almost all e-learning participants increases the amount of information that enters the brain. Visual noise is the various actions of master's students (student teachers), their emotional reactions, the position of their bodies, clothes, hairstyles, interior (screensaver), etc. Students perceived visual noise, analyze it (37% of respondents); are distracted by it (17% of student teachers); repeat it (12% of respondents); can get tired of it (7% of respondents)
Each student determines the direction of sound propagation; some sounds are perceived as background noise (92% of respondents). Also, each student can feel smells (7% of respondents) and physical contact (for example, shaking hands with each other during greetings (4% of respondents)	Communicative noise is perceived as something to which the respondents have to react, since all sounds have a clear directionality (the sound spreads from the plane of the monitor, mobile phone or tablet screen in the direction of the master's student or teacher student)

According to the respondents, the process of organizing e-learning in the online space is considered high-quality if:

1. Events in the online space support the desire to work in the profession and form everything necessary for competitiveness in the labor market.
2. There is existing partnership and cooperation between e-learning participants.
3. Education is expediently integrated with professional activities, and also focuses on international educational processes and standards.
4. The process of organizing e-learning in the online space contributes to the formation of the necessary professional qualities, knowledge, and skills.
5. The content of the tasks concerns both general developments, the formation of a scientific outlook, and the performance of professional duties.
6. There is an active discussion of the results of tasks that are related to the performance of professional duties, since both master's students and teacher students combine learning with the performance of professional duties. Completing professional-oriented tasks reduces the amount of time one needs to spend in front of the computer to prepare for classes and complete various tasks. And the discussion in the online space will enrich each e-learning participant with various ways of solving current issues of professional activity.
7. The teacher determines the optimally sufficient amount of information content of the online e-learning space, reduces visual noise by using didactic materials (presentations,

knowledge maps, tables, graphs, etc.), manages communicative noise (determines main and secondary information, uses chat, discussion boards; expediently and effectively uses modern IT technologies).

4 Conclusion

1. The variability of the definitions of the phenomenon "quality" is specified in the following contexts: the achievement of a certain perfection (excellence) in education, educational process, results; ensuring efficiency, which is established on the basis of comparison of training results with costs; achieving the degree of compliance of the provided educational services with the requirements of the recipients of educational services; introducing changes that lead to the achievement of excellence or efficiency in education, the educational process, and results.
2. The analysis of education as an open system functioning in the environment of other systems proved that in the context of the phenomenon of "quality" in the sense of the introduction of changes that lead to the achievement of excellence or efficiency in education, education as an element can be part of different systems. As an element of one or another system, education changes in the interests of the system itself. Using the example of the system "society - state - education - a person-a subject of economic life - production", these changes relate to a change in values, the introduction of lifelong education, and the informatization of education.
3. The analysis of education as an open system, separated from other systems as a whole structure, the components of which are pedagogical systems, testified that in the context of the phenomenon "quality" in the sense of ensuring efficiency, which is established on the basis of comparing the results of training with costs (time, mental, emotional, material, technological, technical) the process of e-learning is constantly being improved in two directions: ways of improving the quality of e-learning are being developed; more effective models of e-learning organization are being developed.
4. The analysis of education as a process of organizing e-learning in the online space proved that in the context of the phenomenon of "quality" in the sense of achieving the degree of compliance of the provided educational services with the requirements of the recipients of educational services, the degree of compliance is established at the level of functioning of the online space (convenience, accessibility, technology, content) and at the level of the teacher's activity in the online space (attractive professional qualities, organization of self-regulated learning [26], ensuring autonomy based on choice and control [27]).
5. The analysis of education as a process of organizing e-learning in the online space proved that in the context of the phenomenon of "quality" in the sense of ensuring efficiency, which is established on the basis of comparison of learning results with costs (time, mental, emotional, material, technological, technical), effectiveness is, first of all, negatively affected by students' feeling of isolation during e-learning [33]. This feeling is weakened or does not arise at all under such conditions: the presence of an e-teacher who teaches the educational material with enthusiasm [25]; the formation of students' sense of belonging to the e-learning community [8, 23]).
6. The analysis of education as a process of organizing e-learning in the online space proved that in the context of the phenomenon of "quality" in the sense of achieving a certain perfection (excellence) in education, educational process, results, the following is important:
 - a) To prevent the emergence of a state of disequilibrium with a low level of mental activity (depression, fatigue, sadness, etc.) and a higher level (anxiety, etc.), since the intense, prolonged and unmotivated performance of educational activities with the simultaneous experience of "negatively" colored emotions complicates the formation of knowledge and ability and creates prerequisites for the most likely

occurrence of the pre-sick conditions, which are characterized by a significant decrease in the body's functional reserves [19]:

- b) To take into account the dynamics of students' working capacity, which is manifested in the successive change of five stages (the stage of entering work; the stage of relatively stable working capacity; the stage of unstable working capacity as the norm of working capacity; the stage of a gradual decrease in working capacity; the stage of the final rush) that take place in the educational process of different duration: during one educational session (lecture, seminar session, etc.); during one academic day, one semester, one academic year or period of study at a higher education institution [19].
7. We established that master's students and teacher students treat online learning as: 1) an effective way of learning in any conditions; 2) opportunities for self-realization in new conditions; 3) the challenge to be overcome.

Master's students and student teachers establish the following differences between the online space of e-learning and the real space of classroom learning: different location of spaces in relation to the person who studies; different possibilities for choosing a location in spaces; different amount of eye contact, visual and communicative noises.

Master's students and student teachers associate the quality of the process of organizing e-learning in the online space, first of all, with events in the online space, which support the desire to work in the profession and form everything necessary for competitiveness in the labor market. Also, the content of education must be of high quality concerning both general developments (the formation of a scientific worldview, and the fulfillment of professional duties) and the process of education itself (existing partnership and cooperation; appropriate combination of education with professional activity; performance of professionally oriented tasks; optimally sufficient amount of information filling of the online e-learning space).

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PUBLIC-PRIVATE PARTNERSHIP AS A FOUNDATION OF THE FINANCIAL STABILITY OF THE STATE AND HOUSEHOLDS IN THE CONDITIONS OF HEALTH CARE FINANCING TRANSFORMATION IN UKRAINE

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Abstract: Among other mechanisms for maintaining the financial stability of state/local finances and household finances, the potential of public-private partnerships is significant. In this regard, the constructive interaction of the state and business in order to solve common financial, economic, and social problems is especially important. The article defines the role of public-private partnership in supporting the health care sector for providing the population with high-quality medical services and at the same time preserving the financial stability of the state and households; moreover, measures for its development are justified in the research. An assessment of the expenditures of the consolidated state budget for financing the industry, the degree of implementation of state programs and the results of self-assessment of the financial status of households for health care services in the conditions of the transformation of the mechanism of financing the industry and the Russian-Ukrainian war, under which the modern financial system of Ukraine functions, was carried out. The problems of implementation of the planned indicators of the state budget for the financing of the industry have been identified, which need to be solved. The advantages of public-private partnership for the state, private partners, and society are summarized. It is shown that the intensification of the process of implementation of projects/programs based on the principles of public-private partnership in the field of health care will ultimately contribute, other things being equal, to maintaining greater stability of household budgets and the state budget, increasing the efficiency of budget funds spending, as well as expanding the number of medical services and improving their quality. Measures for the development and support of public-private partnership are proposed, which will contribute to balancing the interests of the state, the private sector, and society to eliminate/solve problems in the field of health care under difficult conditions of war and the decline of economy, which will eventually become the basis for supporting the financial stability of the state/local budgets and finances of households and the private sector itself.

Keywords: public-private partnership; budget; health care; financing; household expenses; financial capacity; financial sustainability.

1 Introduction

Today, the consequence of Russia's full-scale military aggression on the territory of Ukraine was the aggravation of the socio-economic crisis, which provoked a significant shortage of financial resources, deepening imbalances in the country's financial system. The stability of the financial system of the state in the conditions of war and in the process of post-war recovery and European integration has become a priority of the state policy of Ukraine. After more than two years of fighting COVID-19 pandemic and the growing need for financing medical services and preventive measures, today the health care system (hereinafter referred to as the HCS) in Ukraine continues to be under increased stress. Difficulties in maintaining the stability of the financial system in general and its components, such as state/local finances and household finances, are exacerbated in the conditions of martial law in Ukraine, thus predisposing to the need to stimulate the development of effective mechanisms for mitigating risks for the social sphere, in particular, in the health sector and increasing availability of a wider list of medical services of appropriate quality for the population.

2 Literature Review

The state and problems of the development of public-private partnership (PPP) in the social sphere and in particular in the sphere of health care in countries with different levels of development, its role in reducing the burden on public finances and achieving the goals of sustainable development are investigated by Delmon, Jamali, Glassman and Chalkidou, Hammami, Ruhashyankiko, Yehoue, Lim, Piltiai, Tulai, Bloom, Craig and Mitchell, Kachula, Salnikova, Romenska, Zapatrina, and others.

In particular, D. Jamali investigated the mechanisms of PPP success and failure in developing countries using the example of Lebanon [8]. O. Tulai outlines a number of advantages of PPP in the field of health care, taking into account the peculiarities of the financial relations that arise between the state and business entities of the private form of ownership and the public sector [42].

A. Glassman and K. Chalkidou believe that it is important to build institutions for the rationalization of public spending in the field of health care, which will allow more reasonable spending of budget funds, in particular, for the purchase of effective drugs, vaccination coverage of children, compliance with transparency in the treatment process, etc. and at the same time, it will protect patients from ineffective treatment [5].

M.K. Lim cites the results of a reasonable PPP development policy in the field of health care in Singapore, which allows distributing the burden of financing between the state and the private sector and achieving national health care goals in terms of balancing efficiency and equity [13]. In another work, Lim emphasizes the need to conduct a reasonable policy of encouraging PPP in the field of health care based on the use of a tripartite model of its effective regulation [12].

A number of researchers emphasize the role of the private sector and determinants of PPP in the process of investing in infrastructure [3; 6], increasing the role of PPP in the process of implementing the Sustainable Development Goals, enshrined in UN documents [47], using the potential of the PPP mechanism to achieve public interests [45]. The researchers also study the countries experience of the operation of PPP projects in the social sphere as a whole, the organizational and economic aspects of the use of PPP, its financial mechanism [26], focus on problematic aspects and inconsistencies in legislation, etc.

However, the growing need for budget funds for the full functioning and development of HCS in Ukraine in the context of the transformation of the industry actualizes research on the role of PPP as a mechanism for supporting the financial stability of state/local budgets and the financial stability of households in the conditions of war and post-war reconstruction and requires scientific research to develop adequate financial decisions and measures.

The purpose of the article is to justify the role and directions of development of the PPP in the field of health care to provide the population with high-quality medical services and at the same time preserve the financial stability of the state and households in the conditions of financing transformation and post-war reconstruction.

3 Materials and Methods

In the research process, general and specific scientific methods based on a systemic approach were used: methods of analysis and synthesis, comparison and logical generalization. The raw data for statistical analysis are obtained from official sources.

4 Results and Discussion

Financial stability of the state and households in the conditions of the transformation of the financing of the healthcare system in Ukraine

The financial stability of state largely depends on the stability of state and local budgets and is associated with the risks of a significant increase in health care costs and, at the same time, limitations of fiscal space due to adverse factors. The risk factors causing a significant financial burden on the budget and the health care system include demographic changes (the rate of population aging, a decrease in the mortality rate in the elderly,

migration processes), an increase in the morbidity of the population and the need for long-term care, as well as an increase in the cost of medical services and medicines themselves, medical equipment, laboratory examination, etc. According to O.V. Stepanova's research, as a result of the growth of age-related expedited budget expenditures, latent fiscal risks arise, i.e., "factors that, compared to planned budget indicators, will require additional fiscal adjustment" [37]. In the conditions of the financial and economic crisis, pandemics and war, additional sharp spikes in budget expenditures for health care occur, as a result of which the imbalances of the budget system are aggravated, and the financial stability of state and local budgets decreases.

Traditionally, in Ukraine, the state takes care of the health care system, the industry was financed mainly through budget funds, which were directed to the maintenance of a wide network of medical facilities. During all the years of the country's independence, specific measures for its improvement were declared.

At the same time, the impetus for the effective reform of the health care system in Ukraine (HCSU) and the transformation of its financing mechanism was given by changes in the legal field and the formation of the National Health Service of Ukraine (NHCSU). Every citizen of Ukraine has acquired the right to receive services free of charge according to the approved standard list (package) in state and communal health care institutions, in accordance with the implemented medical guarantee program (MGP), and the number of MGP packages is dynamic and is supplemented every year. Also, the "Affordable Medicines" reimbursement program was introduced, the Public Health Center (PHCC) and the state enterprise "Medical Procurement of Ukraine" (MPU) were created, etc. NHCSU is empowered by law to implement state policy in the field of state financial guarantees of medical care for the population (under MGP), performance of the functions of the customer of medical services and medicines under MGP, submission of proposals to ensure the formation of state policy in the field of state financial guarantees of medical care for the population to the Minister of Health for consideration [23].

The structural restructuring of HCSU implies the allocation of budget funds at a certain level of the administrative division of country to finance the following types of medical care: emergency, primary, secondary (specialized), tertiary (highly specialized) based on the principle of bringing the provision of public services as close as possible to their potential consumer. Thus, at the district (city) level, funds are received and distributed according to the principle of "money follows the patient" for the provision of primary health care, including emergency, at the regional or state level - for the provision of secondary, tertiary, and emergency medical care. This 'demarcation' of medical care funding is aimed at improving the efficiency of using the potential of state and local health care institutions (HCI) and directing the financial flows of the state budget in accordance with the principle of the budget system' subsidiarity.

In the conditions of COVID-19 pandemic, there was a slowdown in the medical sector reform, and the large-scale military aggression of Russia against Ukraine and the introduction of martial law led to the application of an adaptive budget policy and a change in its priorities. Significant financial flows were aimed at overcoming the consequences of the pandemic, vaccination of the population, and starting from 2022, budget expenditures for financing state security and defense, as well as social expenditures became priorities.

With the beginning of war, the list of types of medical assistance was revised and supplemented. Currently, free services in state and communal health care facilities include: emergency medical care, primary medical care; specialized medical care; palliative care; rehabilitation assistance (at the same time, the state recognizes the right of every citizen to receive rehabilitation assistance during the provision of medical assistance, which is established by law) [24].

In the conditions of war, threats and risks of deepening financial instability in Ukraine experienced growth, the threat of budgetary imbalance has increased due to the narrowing of the fiscal space, the rapid raise of the budget deficit (the state budget deficit for 2023 is planned at the level of 20.6% of GDP); despite the compensatory flows of international financial assistance to balance the budget system, the accumulation of public debt accelerated. According to the forecast of the National Bank of Ukraine, as security risks decrease, economic growth in Ukraine will begin in 2024-2025, and in 2023 it will not exceed 0.3%.

The growing imbalance of the state budget and local budgets made it difficult to finance HCS, as a result of which the process of reforming the industry slowed down.

Budget expenditures on health care nominally increased, but at the same time, taking into account the rate of inflation, they actually have a downward trend (Table 1).

Table 1: Dynamics of expenditures of the consolidated and state budgets of Ukraine on health care (HC) for the period 2017-2021

Index	2017	2018	2019	2020	2021	Growth rate
Expenditures of the consolidated budget on health care, UAH million	1023924	106852	1233846	1757897	2041218	994
% in consolidated budget expenditures	97	93	94	11	111	146
Expenditures of the state budget on health care, million hryvnias	167294	22618	38667	1289237	1710065	923
% in state budget expenditures	19	23	36	97	115	95
The share of consolidated budget expenditures on health care in GDP	34	33	32	42	37	89

Source: calculated and compiled according to [35; 36].

The share of consolidated budget expenditures on health care in GDP for the analyzed period had the highest value in 2020 and 2021, which is explained by the increased needs of the industry during the coronavirus pandemic.

According to the Ministry of Finance of Ukraine, in 2022, health care expenditures accounted for 6.8% of the total expenditures of the State Budget of Ukraine, which is 4.7 percentage points less than in the previous year.

In 2023, it is planned to preserve the minimum wages of medical workers. Health care expenditures in 2023 are planned to total 206.8 billion hryvnias according to the consolidated budget of Ukraine, of which state budget expenditures with transfers amount to 176 billion hryvnias. The priority areas of financing are: implementation of the medical guarantee program (142.7 billion hryvnias), centralized procurement of medicines, medical products, modern equipment (10 billion hryvnias), strengthening of epidemic surveillance for infectious and non-infectious diseases (3.8 billion hryvnias), other expenses in the field of health care (19.6 billion hryvnias). In general, in 2023, compared to 2022, health care expenditures in national currency decreased by 10%. In the dollar equivalent, the reduction is about 40%, which reflects threats to the full provision of medical care. On a per capita basis, total government spending on health care in 2023 will decrease by \$43 (from \$159 to \$116) compared to the previous year. Compared to EU member states, this indicator is low. Thus, according to data from the World Health Organization (WHO), in 2019, public health care expenditures per capita in Hungary amounted to \$722, in Poland - \$724, in Lithuania - \$892, in the Czech Republic - 1,503 dollars, in Slovakia - 1,057 dollars. Also, in these countries, the share of the state in financing health care costs is higher than in Ukraine.

The largest item of health care expenditure in the state budget is MGP. UAH 142.7 billion is planned for its implementation in 2023 (the MGP budget for 2022 was UAH 157.3 billion), UAH 422 million - for the "restoration and development of a sustainable national model of the medical industry of Ukraine". [19].

Also, the State Budget of Ukraine for 2023 provides funds for an additional subsidy to local budgets to ensure the proper maintenance of health care facilities at the local level in the amount of 3.7 billion hryvnias, of which 2.9 billion hryvnias will be directed to local budgets (regional and budgets of territorial communities) [22]. The same procedure took place in relation to the distribution of an additional subsidy in the State Budget for 2022. In the difficult conditions of the war, HCSU adapts to modern realities and works in operational mode. In 2022 and 2023, the MGP is financed, which ensures greater stability of this level of medical care and reduces the burden on household budgets and their financial stability.

The issue of rational and more effective use of budget funds of HCl, improvement of budget planning is especially relevant in wartime conditions. According to the results of the third quarter of 2022, HCIs had unused 24.8 billion hryvnias on their accounts, which is 1.6 times more than at the beginning of the year. These are institutions of primary medical care (3 billion hryvnias, which is an increase of 1.8 times compared to the beginning of the year), emergency medical care (3 billion hryvnias, an increase of 10%), specialized medical care (18.8 billion hryvnias, an increase of 1.7 times). That is, in the conditions of martial law, there is a growing threat of unbalancing the budget system due to the disruption of communication and information flows, the impossibility of implementing MGP in temporarily occupied territories or territories recently liberated from the enemy, the growing need to deploy temporary mobile hospital facilities to replace destroyed ones, and the occurrence of other costs – that were practically impossible take into account in the budget planning process. In the situation of threats related to the provision of medical services, objective conditions for under-fulfillment of planned budget indicators and ineffective use of funds from the state and local budgets arise. Identified problems of implementation of the planned indicators of the state budget for financing the industry need to be solved.

In the structure of spending on HCSU by financial agents, the share of household spending on health care is almost at the same level as the share of the government, and in some years it exceeds it (Table 2).

Table 2: The structure of health care costs in Ukraine by financial agents, %

Financial agents	2017	2018	2019	2020	Changes 2022/2017
Total health care costs	100	100	100	100	-
Government	49.64	47.56	46.77	49.90	0.26
Private sector	49.46	51.67	52.50	49.65	0.19
Other private voluntary insurance	0.87	0.91	1.02	0.95	0.08
Household expenses	47.45	49.74	49.22	46.38	-1.07
Non-profit organizations serving households	0.01	0.02	0.04	0.03	0.02
Private firms and corporations	1.13	0.99	2.23	2.28	1.15
A whole other world	0.9	0.77	0.73	0.45	-0.45

Calculated according to [35]

The data in Table 2 show that the share of household expenditures in 2017-2020 in the total amount of health care expenditures is significant compared to other financial agents of the private sector, and in 2018-2019 it exceeded the share of the government.

O. Kirylenko et al. consider that an important component of the financial condition of households is their expenses, therefore, despite the growth of household expenses in Ukraine in absolute values more than threefold for the period of 2010-2020, their financial condition has not significantly improved [11].

Let us consider the structure of aggregate household expenses in Ukraine and the share of health care expenses in their composition (Table 3).

Table 3: Structure of total expenditure

	2014 ¹	2015 ¹	2016 ¹	2017 ¹	2018 ¹	2019 ¹	2020 ¹	2021 ¹
Average monthly total expenditure per one household, UAH	4048.9	4952.0	5720.4	7139.4	8308.6	9670.2	9523.6	1124.34
<i>Structure of household total expenditure, percent</i>								
Total consumption expenditure including health	91.6	92.9	93.2	92.9	92.0	91.3	91.4	91.3
Non-consumption total expenditure	3.6	3.7	4.2	3.8	4.0	4.1	4.3	4.7
For information: payment for housing, communal products and services	8.4	7.1	6.8	7.1	8.0	8.7	8.6	8.7
	8.1	10.2	14.7	15.4	13.9	13.0	12.9	13.8

¹Excluding a part of temporarily occupied territory of the Donetsk and Luhansk regions.

In general, there is a clearly expressed trend of growth in consumer spending by Ukrainian households, in particular, on such a component as spending on health care - the purchase of medicines, medical products, etc. A significant increase in the inflation index (and consumer prices for these goods) reduces the financial capacity to purchase necessary goods for both the state and households, which affects their financial stability. Therefore, the vulnerability of households to financial costs related to health care (prevention/treatment) increases significantly. An excessive burden on household budgets in 2023 due to the need to buy medicine may become an additional factor in disrupting their financial stability and increasing the level of poverty. The tendency of decreasing financial stability of households is strengthened by the permission for public and communal health care facilities to independently establish the fees for services that are not covered by the MGP for medical care of the population, which increases the population's expenses for medical services, medicines, supplies, etc.

An important principle of reforming the health care financing system in Ukraine is the inadmissibility of: a) significant (catastrophic) household expenses in case of illness and b) refusal to receive necessary medical care due to the inability to pay for it at the time of receipt. Conclusions to what extent the implemented measures in the process of medical reform allow adherence to these principles can be made, taking into account the results of the self-assessment by the population of Ukraine of the level of availability of certain types of medical care in 2021 (according to the data of a sample survey of the households' living conditions) [28].

Analysis of the distribution of households according to the level of medical care availability, the possibility of purchasing medicines and medical supplies depending on the gender and age of the persons who make up the households allows making the following generalizations.

Among the surveyed households which were included in which any of the members during the last twelve months (as a percentage of the total number of households in the relevant age group), the following data were obtained:

- The number of those who needed medical assistance, purchase of medicines and medical supplies in all age categories ranged from 97.2% (men aged 35-59) to 99.1% (women aged 18-35);
- The number of those who, when needed, could not get medical help, buy medicine and medical equipment ranged from 16.0% (men 18-35 years old) to 30.4% (women 60+).

Among the surveyed households in which any of the members could not, if necessary, due to the too high cost of goods or services, buy medicine was in the range of 94.3% (women 18-35 years old)-98.4% (women 60+); those who could not purchase medical supplies was 96.6% (women under 18) - 100% (women 18-35); those who could not visit a doctor - 64.3% (women 60+) - 74.6% (men 35-59); those who could not visit a dentist - 93.7% (women aged 18-35) - 99.4% (women aged 35-59); those who could not afford prosthetics 88.2% (women 18-35 years old) - 100% (men 18-35 years old); those who could not afford medical examinations - 83.9% (women aged 18-35) - 92.0% (men aged 18-35); those who could not receive medical procedures - 92.3% (men 60+) - 98.5% (women 35-59); those who could not receiving treatment in a hospital - 87.8 (women under 18) - 91.2% (men 60+). The lowest among the considered indicators is the share of households that could not obtain medical assistance, purchase medicines and medical supplies when necessary, which was ranging from 16.0% (men 18-35 years old) to 30.4% (women 60+). On average, 97.8% of household members needed medical assistance, the purchase of medicines and medical equipment during the last twelve months (in each age group, this indicator was greater than 90%), and about 21% of households could not receive such assistance. There is a significant share of households in which any of the members could not purchase the necessary medical products, receive medical procedures, conduct medical examinations, visit a doctor, dentist, etc. due to the high cost of goods or services. The analysis covers the pre-war household survey but is likely that the situation has not improved in 2022. Taking into account the growth of unemployment in the conditions of the war [43], the financial capacity of households deteriorated.

Thus, in order to comply with the above outlined principles of reforming the health care financing system, improving the quality and availability of the provided medical services, it is necessary to implement effective mechanisms, taking into account that the implementation of numerous social and economic tasks of the country is associated with constantly growing limitations in the budget sphere. Among other mechanisms for ensuring the financial sustainability of state/local finances and household finances, as evidenced by the positive world experience of countries with different levels of development, the potential of state and private sector partnerships is significant. In this regard, their constructive interaction with the aim of solving common financial, economic, and social problems is especially important. After all, such a partnership is most widespread in the world precisely in the case of a budget deficit, crisis phenomena in the economy.

PPP as a basis for increasing the financial stability of the state and households and measures to activate it in the field of health care in Ukraine for post-war recovery

According to the definition of the UN European Economic Commission (UNECE), a public-private partnership (PPP) is a long-term contractual agreement of an innovative nature regarding the development of infrastructure and the provision of public services through the use of funds, experience, and motivation of the private sector in areas that usually constitute the field of government responsibility [7, p. 5].

The basis of partnership relations of the public and private sectors should be the coincidence of their interests in a certain industry or field of effort, which reflects the content of PPP. The PPP model in the world is perceived as an important mechanism that has been used recently in the global health context. Using this model, numerous international organizations form unified project charters to jointly achieve mutually agreed goals. PPP is presented as an ideal mechanism for synthesis of resources and maximization of benefits in numerous programs, at the same time it is important to coordinate/combine its implementation with solving the problems of sustainable development [36]. Most contemporary researchers agree that large-scale collective efforts and joint use of resources have greater potential to effect lasting change than any single organization can achieve alone [34].

The partnership of the state and business in the social sphere has its origins in the mid-1980s and was implemented as social investments. Social investment integrates private and public interests in the long term, satisfying the needs of both parties. Social activity and social responsibility of business in the last decade have become a necessary condition for its prosperity and are harmoniously woven into the strategic goals of development [16; 27], which allows private companies in crisis conditions, as a rule, to slightly reduce social partnership projects, rather than completely cancel them.

Bloom, Craig, and Mitchell define the modern role of the state and the private sector in the implementation of PPP in health care: the government should retain overall responsibility for regulation, taxation and quality control, while the private sector and other actors should include national interests as one of its key goals [2].

Delmon J. sees PPPs as part of a global shift in the role of government - from a direct provider of public services to a planner, contract manager and/or regulator that ensures the availability of local services that meet basic quality standards and are accessible to users and the economy. PPP, according to the researcher, can provide more efficient procurement through cheaper, better, faster and better quality, provide new sources of innovation, technological achievements and investments, including through project financing. Governments should initiate, encourage, and manage PPPs in the necessary sectors, balancing the distribution of PPP risks [3].

In such developed countries as Great Britain, Italy, Canada, France, among all spheres of the economy, the implementation of projects based on PPP in health care is a priority, which is determined by the policy of these states and the level of their socio-economic development. In other countries of the world (Austria, Belgium, Denmark, Australia, Israel, Ireland, Finland, Spain, Portugal, Greece, South Korea, Singapore, and others), there are also examples of successful use of this mechanism in health care - construction, reconstruction, modernization of medical centers, hospitals, etc. [47].

Statistical data show that the development of public-private partnership in EU countries and the world is characterized by positive dynamics, and the number of implemented projects in the field of health care is increasing. Thus, in Great Britain, thanks to the PPP, 107 hospitals of the National Health Care System were reconstructed in thirteen years; a partnership for the development, management, and maintenance of comprehensive medical care is implemented in Austria; in Denmark, the development of a national electronic health portal is carried out on the basis of PPP; in Romania, PPP enabled privatization of outpatient hemodialysis services; in Beijing, Hong Kong, and Shanghai construction of public hospitals and their management was implemented thanks to PPP [4]. In Kazakhstan, as of 2020, 864 PPP projects worth more than \$2.3 billion have been implemented, while about 20 percent of these projects belonged to the field of health care [4].

A successful practical example of PPP in the field of health care is the experience of Singapore. Singapore currently has high standards of healthcare delivery, but a significant share of healthcare spending is shifted to the private sector. The share of the government in the total expenditure on health care decreased during the years of independence from 50% (1965) to 25% (2000). Health care financing reforms in Singapore are aimed at increasing efficiency, are based on the predominance of individual responsibility over state responsibility, and apply flexible state response. Developed regional medical centers also serve foreign patients, competition is determined by price and quality, while medical care is available to citizens of the country, who pay part of their medical expenses, as well as additional money if they require a higher level of services. In fact, access to necessary care for the poor is guaranteed, and protection mechanisms against financial impoverishment due to catastrophic illness are also formed [2; 13].

Lim believes it is a sensible policy to encourage PPPs in the health sector to participate in the financing and provision of health care. For effective regulation of the process, according to the researcher, a tripartite model is needed, which will involve not only the government and suppliers, but also authorized consumers. Government should distance itself from the role of providers, and providers should compete and collaborate to create health care systems with higher value than what others can offer [13].

According to the current legislation in Ukraine in the field of health care, the use of PPP is allowed [21]. In Ukraine, a total of 193 contracts have been concluded on the terms of the PPP, of which only 18 are implemented today (9 concession agreements, 5 agreements on joint activities, 4 other agreements), the rest (162 agreements) are not implemented (116 are not functioning, 46 are terminated/expired, 13 are suspended in connection with Russia's armed aggression against Ukraine). In the field of health care, only two projects are being implemented on the basis of PPP - in Kyiv and Lviv regions (Table 4).

Table 4: The number of PPP projects implemented in the regions of Ukraine by sphere of activity as of January 1, 2023

Region	A	B	C	D	E	F	Total
Dnipropetrovska	1						2
Zhytomyrska	1						1
Zakarpatska	2	1					3
Zaporizhzhvska		1				1	2
Kyivska		1		1			2
Kirovohradska					1		1
Odeska		2			1		3
Lvivska				1			1
Poltavska			1				1
Khmelnytska						1	1
Chernihivska	1						1

Conventional designations: A - production, transportation and supply of heat and distribution of natural gas; B - collection, purification, and distribution of water; B - waste management, except collection and transportation; D - health care; E - tourism, rest, recreation, physical education and sports; F - others.

Thus, it is possible to state the initial stage of the PPP development in the field of health care in Ukraine, at which it is important to apply stimulating and supporting instruments and levers of state financial policy [9].

In general, in Ukraine, the importance of forming a partnership system as a constructive mechanism of interaction between state authorities, private capital, and the public sector in order to solve problematic issues in the field of health care and at the same time with the aim to reduce the burden on the budget and finances of households is growing. The role of PPP in Ukraine will grow to concentrate joint efforts to restore the medical industry damaged by the war. According to government estimates, about 14.6 billion euros are needed to restore the medical system according to preliminary calculations [40]. The use of the PPP mechanism will be appropriate from the point of view of modernization of the health care system in Ukraine, restoration of the destroyed medical infrastructure, improvement of quality and expansion of the list of medical services and access to medicines.

A decisive role will be played by the financial capacity of business entities and their willingness to participate in projects due to, as a rule, their high capital intensity, long implementation period, existence/emergence of various risks.

The state does not have enough funds for the implementation of investment projects approved for fulfillment in the field of health care, as evidenced by their insufficient funding (Table 5).

Table 5: The state of implementation of priority state investment projects in the field of health care

Name of the state investment project	The total cost of the project, thousand UAH	Funded as of January 1, 2021	The balance of the need, thousand hryvnias	Completion %
Construction of a modern medical and diagnostic complex of the National Children's Specialized Hospital "Okhmatdyt" (transitional since 2016)	4984492.47	3523060.1 Tender for the amount 39664810.24 UAH (year 2017)	1461432.26	70.68
Creation of a modern clinical base for surgical treatment of eye pathology (transitional since 2017)	562595.00	260704.00	301891.00	46.34
Construction of the medical and rehabilitation building of the State University "National Institute of Cardiovascular Surgery named after M.M. Amosov NAMNU" (transitional since 2017)	2837682.68	303441.87	2534240.82	10.69
Improvement of molecular genetic diagnostics of oncology diseases in Ukraine (start in 2020)	106124.56	1306.16	104818.41	1.23

Source: [10; 14]

Data in Table 5 demonstrate the unsatisfactory state of financing of priority state investment projects in the field of health care. Only the completion of these projects alone requires significant expenditures from the state budget. Therefore, the need to involve private business in the implementation of state investment projects/programs in the field of health care in Ukraine today is extremely great. The important advantages of such a partnership in HCSU are positive consequences for the state, the private partner, and for the whole society (Table 6).

Table 6: Positive aspects of the implementation of projects on the basis of PPP in HCSU

	Positive aspects
State	Creation of modern infrastructure, preservation of property of state/communal health care facilities; improving the quality of medical services, reducing budget costs for the construction, maintenance, and operation of health care facilities, sharing the risks associated with the implementation of the project with a private partner, saving and increasing the efficiency of spending budget funds, the possibility of prolonging costs over time, when there is not enough resource; reduction of time for project implementation, reduction of risks
Private partner	Acceleration of permitting processes and reduction of individual risks. Financial guarantees of the state, expansion/stabilization of business, reduction of financial risks, the possibility of implementing the project at the break-even level, obtaining a guaranteed income during the validity of the PPP agreement. The partner receives the right to provide non-medical and related services at market prices, can use tax or other benefits/incentives, if they

	are provided by the current legislation. The opportunity to enter a project with stable demand and financing guarantees.
Society	Expanding the list and improving the quality of medical services while maintaining their availability; balance between the price and quality of medical services, elimination of the corruption component in health care, reduction of the number of informal payments.

James Hope, director of the USAID Mission in Ukraine, reported that, according to the research of the USAID Project "Health Care Reform Support", for the years 2018-2021, the prevalence of informal payments in the country at the level of primary medical care decreased by three times and amounted to 21.4%, which is an achievement of the medical reform [44].

The signs corresponding to PPP are the following: 1) construction (new construction, restoration, reconstruction, capital repair, technical re-equipment) of a PPP object and/or management (operation, maintenance, etc.) of such an object; 2) a long period of relationship (from 5 to 50 years); 3) transfer of part of the risks to a private partner; 4) investment by a private partner in the PPP object.

Projects in the field of health care, which can potentially be implemented on the basis of PPP, are mainly aimed at expanding the range and improving the quality of service provision; they imply compliance with a certain level of social standards, as well as promoting the development of medical tourism.

Depending on the availability of state guarantees for social projects based on PPP, they are grouped into the following groups: 1) low-risk, with high investment attractiveness (they have state guarantees of minimum profitability) and 2) high-risk, with low investment attractiveness (there is a lack of state guarantees of profitability, which depends on consumer demand for services). In general, in both cases, projects in HCS are more risky and less profitable than in other areas [26], therefore less attractive for the private partner, which requires measures to encourage/support/stimulate them.

The goals of the project on the basis of the PPP should correspond to the priorities of the state (local) policy and the Sustainable Development Goals, with a description of how exactly the selected project will contribute to the achievement of the state (local) strategic program and individual Sustainable Development Goals, taking into account the UNECE Methodology for assessing public-private partnerships for the benefit of people in the interests of achieving the Sustainable Development Goals [46].

The private sector should also use the indicators of the Global Health Security Index (GHSI) in a specific country to find opportunities for partnerships with governments in the field of health care - such recommendations are presented by the developers of this index [1].

In the coming years, as the Ministry of Finance of Ukraine emphasizes, Ukraine will focus on ensuring the financial stability of medical care, transforming the network of healthcare facilities, developing human resources and improving public health. The priority will also be to strengthen medical services caused by the war - in particular, rehabilitation and prosthetics. Sources of funding for PPP projects can include: financial resources of a private partner; financial resources borrowed in accordance with the established procedure; funds from the state and local budgets; funds from other sources not prohibited by law.

A key aspect of positive changes in the cooperation between the state and business in Ukraine is an active state financial policy of supporting the development of PPP in the healthcare, which, according to the research of S.V. Kachula [9] will contribute to stimulating the concentration of society's financial resources in certain promising sectors of the economy, in particular, in the health sector in order to launch mechanisms for the preservation

and development of human capital, the development of priority social projects by combining funds from the state and local budgets and financial resources of the private sector on the basis of supporting the implementation of PPP projects. The provision of state credit, currency, tariff, social, and other guarantees for PPP projects should take place on the contractual basis specified in the partnership agreement, and in order to comply with the fiscal and debt parameters of the budget system, should not go beyond this agreement. The effectiveness of the state financial policy is measured by the creation of conditions for open competition or compliance with assumed financial obligations [9].

The process of Ukraine's integration into the European medical space gives the country the opportunity to participate in direct grants and joint action grants for EU state institutions. In 2022, Ukraine joined the European grant program EU4Health and submitted applications for participation in direct grants and joint action grants for EU state institutions. Also, Ukrainian public and patient organizations and associations (organizations) have already started submitting applications for small grants within the framework of EU4Health, which will contribute to the strengthening of health care in Ukraine.

As a result, balanced partnership relations of the state/local authorities with the private sector have a positive effect on the strengthening of social security, improving the quality of life of the population, and the successful development of territories and the country as a whole. The development of public-private partnership in Ukraine in the field of health care is important in view of the need to restore social infrastructure objects of considerable volume and value, in particular medical infrastructure, which suffered as a result of the war, due to a lack of budgetary resources and, on the other hand, in view of the growing need for social services and at the same time, a decrease in the financial capacity of a significant number of the population.

A systematic assessment of the financial sustainability of state/local budgets is important for the timely identification of budget imbalances and their causes [15; 17], which contributes to the adoption of reasonable management decisions of a current and strategic nature regarding the development of health care facilities, the provision of high-quality medical services and the improvement of the level of well-being of the population. Equally important measures are the preservation of the stability of household finances, one of the important factors in the violation of which can be health care costs.

Therefore, PPP is one of the promising mechanisms for the implementation of a number of projects in HCS and in reducing the burden on the budget and finances of households, especially in times of crisis and war. The development of PPP in the field of health care requires design of financial policy measures to stimulate and support important PPP projects. Effective measures to stimulate and support PPP projects in the field of health are proposed to be carried out taking into account the differentiation/zoning of territories/communities for financing: high-risk (temporarily occupied territories, front-line territories), potentially high-risk (located near front-line territories), moderately risky (all other), taking into account a number of indicators - the state of the medical infrastructure, the supply of medical personnel, migration processes, including the number of temporarily displaced persons, the unemployment rate, the consumer price index, the state of the fiscal space and local budgets, debt burden.

5 Conclusion

The main trends of the financial stability of the sector of public finances and household finances of Ukraine in recent years have been revealed. It is substantiated that in the conditions of the Russian-Ukrainian war, the risks of deterioration of financial stability in the country and the financial ability to finance health care system both at the expense of budget funds and household funds are exacerbated. The importance of taking into account the financial sustainability of the state, local, and household budgets

in the process of transforming the financing of HCS in Ukraine is due to the aggravation of the risks of financial losses in the conditions of war and the deterioration of the health of the population.

The important conditions that will contribute to the development of PPP in Ukraine, in each of its regions, as emerge from our research, are the following:

- Consistent implementation of state financial policy measures in the sphere of promoting the development of PPP in Ukraine based on the drawing up of the Concept of development of PPP in the social sphere for the medium and long term;
- Formation of priority directions, according to which projects can be implemented on the basis of PPP in the health care;
- Stimulation/support of business initiatives and the use of financial mechanisms/instruments of business involvement in the formation and implementation of socially significant programs in the field of occupational health and safety in the regions based on social partnership and the development of PPP mechanisms;
- Creation of institutional conditions for the activation of partnership relations between business and the government for the implementation of priority state/regional programs in the health care system on the basis of PPP.

For the dynamic development of PPP, taking into account the experience and trends of its successful development in the countries of the world, the following is necessary:

- Simplifying the procedures for submitting projects;
- Developing measures to neutralize the influence of the corruption component through online modes of submission of proposals, the fight against the shadow economy and potential corruption schemes;
- Establishment of shortened terms for consideration of business investment proposals related to the initiation of programs in the health care system and strengthening of control over this process;
- Development of incentives for businesses that implement programs in HCS at the regional level;
- Further popularization of PPP in society using various means of communication.

Territorial authorities and local self-governments, taking into account the perspective and necessity of cooperation with business for the restoration and development of medical infrastructure on an innovative basis, should be interested in long-term partnership relations for the implementation of regional/local projects/programs in health care by supporting and stimulating/encouraging business, activation integration of financial mechanisms and tools of socially responsible business based on the development of PPP. The implementation of the best world practices in Ukraine in the process of implementing regional social programs based on PPP, which involves projects and programs agreed with the community, the introduction of public control over their efficiency and effectiveness, is a perspective for further research.

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CREATIVITY OF ASTOR PIAZZOLLA IN THE CONTEXT OF THE DEVELOPMENT OF FOLK-INSTRUMENTAL PERFORMANCE

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Abstract: The article analyzes the work of a famous Argentine musician and composer of the 20th century Astor Piazzolla in the plane of his influence on folk instrumental art of the second half of the 20th - beginning of the 21st century. Based on the analytical characteristics of individual compositions, the immanent features of the author's work of A. Piazzolla are singled out. It was noted that on the basis of the everyday song and dance genre, the foundation of which is folklore traditions, the composer, thanks to the means of musical expressiveness (synthesis of traditional and new possibilities of classical and jazz harmony, rhythm, methods of development of musical material, tonal comparisons, aesthetics of performance techniques), creates an original "New tango", which synthesized the features of different musical cultures. The widespread solo and ensemble genres of A. Piazzolla's work are singled out, which led to changes in repertoire priorities in the folk-instrumental art of Ukraine and abroad, in particular in the performance of accordionists, guitarists, etc., as well as numerous chamber-instrumental ensembles of various composition. Comparative trends in the interpretation of A. Piazzolla's work by foreign and Ukrainian performers are summarized.

Keywords: Astor Piazzolla; tango genre; new tango; Argentine musical culture; creativity and performance; folk-instrumental art; folk-instrumental performance of Ukraine; performance interpretation.

1 Introduction

A significant phenomenon of the world musical culture of the 20th century is the unique compositional work of Astor Piazzolla (1921–1992), an Argentine musician and composer of Italian origin of the 20th century, reformer and creator of the Nuevo tango¹ concert style of instrumental tango. The novelty of the "revived" Latin American dance consisted in its modification at a qualitatively new level of musical thinking - a classical art form that organically fit into the context of world musical culture. The composer presented a new poetics and aesthetics of tango, interpreting it in the genres of synthesizing academic music and stage art.

A. Piazzolla's "New Tango" is connected, first of all, with the creation of an independent academic genre independent of traditional tango (entertaining music with songs and dances). His works are expanded compositions, deeply serious (dramatic) in content, saturated with an unusual combination of polyphonic voices, dissonant chords, and a developed instrumental fabric. They are based on new tempo ratios (slow, moderate, fast), new aesthetics of form creation (introduction of a slow middle section with a tragic, emotionally saturated content), and typical rhythmic formulas characteristic of Latin American music are used. At the same time, this is not musical eclecticism, but a conscious introduction of new intonations, rhythm, and content into traditional tango. Tango is a synthesis and interaction of various musical cultures (Italian, Spanish, Cuban), and in general - Latin American musical culture in all its manifestations (authentic and stage folklore, salon and street music, urban and everyday conglomerate of national song and dance music, jazz intonations and academic symphonic culture of the era). All these folklore origins gave the world a new artistic result, which defined a new genre of academic chamber-instrumental music. At the same time, the main musical instrument for the performance of "New Tango" is the

bandoneon - a folk instrument that, in the conditions of the general direction of the academicization of folk-instrumental art in the 20th century, determined new repertoire and performance trends of development.

The purpose of the article is to summarize the compositional achievements of the Argentinian composer Astor Piazzolla in the context of the development of folk instrumental performance of the second half of the 20th - beginning of the 21st century.

Among the tasks determined by the set goal, there are the following:

1. General characteristics of the tango genre, features of its existence, specifics of the use of musical instruments in its representation;
2. Analysis of work of Astor Piazzolla's as the creator of "New Tango";
3. Consideration of the evolution of the bandoneon in the work of A. Piazzolla from a pop and entertainment instrument to an academic, classical instrument;
4. The influence of the composer's creativity on the repertoire trends of folk instrumental art;
5. Representation of the work of A. Piazzolla in the performance of soloists and collectives of Ukraine and abroad.

2 Materials and Methods

The study of A. Piazzolla's work belongs to the current directions of musicology, as it appears to be an integral phenomenon of both world and regional, including Ukrainian, modern musical cultures. This is confirmed by a large number of concerts, performance competitions, and festivals dedicated to the composer's name, which take place on the professional concert stage of Europe, Asia, America, Australia, as well as Ukraine.

In order to consider the artist's work in the context of the development of folk instrumental art, the article uses the methods of historiographical, source studies, cultural and music-theoretical approaches. They made it possible to single out A. Piazzolla's work not only as an important component of modern folk-instrumental art, but also its influence on the repertoire trends of performance, in particular ensemble.

3 Results and Discussion

Tango genre: theoretical and historical aspects of existence

Tango is an ancient Argentine folk dance of free composition, with an energetic and clear rhythm². From its original occurrence, this dance was "doomed" to the synthesis of various dance styles, intonations, melodic and rhythmic patterns, in which tango was unmistakably recognizable.

The origins of Argentine tango lie in the mixture of traditions of the numerous Neapolitan emigration and the true Argentine melos - milonga. Undoubtedly, the most important thing is that this entertaining song and dance genre was started in the suburbs of Buenos Aires (Argentina) in the 80s of the 18th century, when a stream of first-generation foreigners from Europe, including Italy, arrived in the country. They usually settled in Buenos Aires and Montevideo (Uruguay).

¹ Nuevo tango (from Spanish - new tango) is an instrumental play transformed from the traditional Argentine tango by enriching it with melodic intonations characteristic of Italian folk songs, techniques of contrasting imitative polyphony, jazz rhythms and harmony, synthesizing elements of the musical language of B. Bartok and I. Stravinsky.

² Various types of tango also existed in Spain. Among them: Andalusian (or so-called "gypsy tango") - a solo female dance; Creole - a pair dance in which the partners danced separately from each other (performed accompanied by an accordion, mandolin, or small street orchestras, which included a guitar, violin, harp, and flute). During the first decade of the 20th century, hundreds of Argentine tangos were created. The range of popular authors includes A. Villoldo, R. A. Mendisabal, H. Mallo, D. Santa Cruz Wilson, E. P. Delfino, later - H. Sanders, E. Donato, H. Matios Rodríguez.

It should be especially noted that the common musical heritage of both countries has been established in the world as "Argentine tango", because namely Argentina made a great contribution both to the improvement of the dance's choreography and music, and to its popularization in the countries of South America and Europe. Buenos Aires has turned into a kind of Mecca for professional performers and fans of tango from all over the world.

Among the genre-stylistic features of the dance, the most expressive is the interaction of the two-part Cuban habanera and its European version - the Andalusian tango, brought by Spanish dancers, with a payada (a poetic improvisation accompanied by a guitar accompaniment, characteristic of rural Argentine music) and a syncopated milonga, which quickly turned from a song into a popular dance for the population of Arrabeli. Later, the milonga became intertwined with the Afro-Argentine candombe, a rhythmically complex dance that the compadritos adopted from the black residents of Buenos Aires.

The first instruments for dance accompaniment were the guitar, flute and violin, to which at the turn of the 19th and 20th centuries, piano, double bass and bandoneon were added³. The formed compositions of the orchestra were considered classical, and the bandoneon in combination with strings gave tango a special sound characteristic only for this music. It became an attribute of the instrumental ensemble accompanying the song and dance performance. Thanks to the bandoneon, tango music acquired a new sound, more tense and dramatic.

According to its genre characteristics, Argentine tango is divided into several types: tango-salon (it differs in a more open position of dancers in a pair, based on the principles of improvisation); alternative tango (music from other styles transformed for use in tango dance); tango fantasy (staged tango, which is used in show programs with a characteristic virtuoso performance technique); ballroom tango (sports dance, oriented for international competitions with certain rules of staging and movements); milonga - a genre of Argentine folk art (song and dance), as well as the name of a dance evening where tango, tango-waltz, and milonga are danced.

Thus, the immanent features of the genre - the couplet form of song and dance music - were formed historically. In traditional Argentine tango, the typical rhythm formulas of the accompaniment are combined with characteristic melodic lines, the basis of which were: the rhythm of the habanera ("The Dove" by S. Iradier, "El choclo" by A. Viloldo), a stable pulsation without a dotted rhythm ("Blue sky" by J. Rixner), a free cadence-like improvisation, the origin of which goes back to folk violin instrumental compositions ("Jealousy" by J. Gade).

Like jazz, tango was a fundamentally new music at that time. The success of the South American novelty in Europe, in its French version, stimulated the development of dance choreography and music in its homeland. Then, in the work of many Argentinean and Uruguayan composers, two musical trends merged - Creole and Europeanized, which led to the appearance of varieties of dance tango. At the same time, despite the strong European influence, the tradition of classical tango in Argentina turned out to be irreplaceable with other modern music trends. But over time, this dance succumbed to the destructive processes of stylization: the secular salon, and later the variety show, removed the national element from it.

³ The bandoneon belongs to a type of harmonica, the history of which originates from the manual aeoline (an instrument with copper valves and a leather bellows in three folds, designed by F. Bushmanov in Germany in 1822). The intensive search for new instruments led to the creation of the "concertina", designed in 1827 by the English inventor Charles Whitton. In 1829, Viennese organ master K. Demian designed a harmonica, which was named "accordion". Later, in 1834, K. F. Ulig, a music master from Chemnitz, offered his version of the instrument, the so-called "German concertina". Namely it became the prototype and basis of the bandoneon of the German designer Heinrich Band (1821-1860) as a substitute for an organ in parishes too poor to afford a real instrument.

The bandoneon is a type of accordion with buttons on both keyboards. Made in Krefeld (1840), it has a quadrangular shape and produces two different sounds when the bellows moves (that is, there are twice as many sounds as there are buttons on the keyboard). The bellows is multifold, which allows stretching it to the full width of hands. In Latin America, the instrument became widespread starting from the 1840s.

More "lucky" was tango song, which arose in parallel with tango dance. It was and remains a specific feature of the national spirit of Argentine tango. In order to rise to the level of a national symbol, tango needed a person who would combine in himself the features of a national favorite. In the 1920s, the Argentine singer, the world's most famous tango performer on stage and screen, composer and film actor - Carlos Gardel - became such a person⁴. His name is associated with the beginning of the vocal tango era, when it acquired features of romance. Thanks to his talent, the eternal idol of the Argentinean public raised singing under tango music to the level of true art, brought it to the stage of prestigious concert halls and theaters. Characteristic features of vocal tango are melancholy and dramatic music and poems with eternal themes of unrequited love, loneliness and nostalgia.

Bright creators and performers of tango accompany the life of each new generation of Argentines. Julio de Caro, Enrique Delfino, pianists Osmar Hector Maderna, Horacio Adolfo Salgán, and others were the innovators of tango who achieved success among the Argentine public.

Nuevo tango - a genre modification of dance in the work of A. Piazzolla

The chronological aspect of the 1930s and 1940s became "golden" in the historical development of tango. But with the appearance of the music of Elvis Presley and rock and roll in the 1950s, in the 1960s - the Beatles ensemble, and especially the "New Tango" of A. Piazzolla, traditional tango in its everyday song and dance use began its gradual declining. Over time, it became clear that the work of A. Piazzolla opened a new page in the evolutionary process of the named genre. The relevance of his ideas in the search for a way out of the crisis state of tango is obvious. Careful treatment of authentic material allowed A. Piazzolla to single out the essence of tango music, to sublimate its aggressiveness, to combine penetrating melodies with sharp dissonances, in a through manner conveying the painful awareness of the tragedy of everyday life and to create a new genre of high art [1].

It should be noted that A. Piazzolla's studying in 1954-1955 in Paris, in the class of N. Boulanger, prompted him to search for and create his own musical style⁵. In his opinion, the individuality of the composer did not lie in the creation of intellectual music, but rather tango with elements of classics and jazz. While in Paris, A. Piazzolla recorded several of his compositions with a string orchestra. Since then, the musician returns to his favorite instrument - the bandoneon, and finally decides to devote himself to the creation of chamber music, the genre basis of which is Argentine tango.

A. Piazzolla set himself the task of creating a new tango music that would accumulate the voices and rhythms of contemporary Buenos Aires. Namely this became the "great transformation of tango" - something that supporters of traditional music could not forgive him for a long time. The composer refers to this situation as "the war of all against one". The so-called "tango traditionalists" intimidated A. Piazzolla's family and even once beat him on the street for "changing" the music. He had to remind the public about N. Boulanger's "blessing" on his own creativity and transformation of tango - as a mission assigned to him by fate [1]. Namely his communication with N. Boulanger convinced him of the connection between not only two different musical worlds - Latin American and European, but also folk-instrumental and academic.

The figurative spheres of Piazzolla's music are diverse - these are love, jealousy, separation, meetings, expectations, holidays. The same diversity is characteristic for genre palette of the

⁴ In honor of C. Gardel, the capital of Argentina celebrates "International Tango Day" on December 11. Gardel's voice was declared a cultural heritage of humanity by UNESCO for his contribution to the spread of tango in the world.

⁵ Nadia Boulanger (1887-1979) was a composer, organist, conductor and teacher. A graduate of the Paris Conservatory in the class of G. Fauré, a student of M. Ravel. Her teaching activities in the fields of composition, counterpoint, harmony, and music history brought her world fame. Among her students, there were Dina Lipati, Ihor Markevich, Aaron Copland, Walter Pistov, Eli Sigmester.

composer's works – tango miniatures, tango poems, tango dedications, ballads, jazz pieces, fugues, program compositions based on Latin American rhythms unfolding in time space, etc. Departing from the everyday song and dance genre, the basis of which is folklore traditions, Piazzolla expresses his creative, performing, and compositional understanding of the essence of melody with concrete means of musical expressiveness (elements of harmonic language, rhythm, methods of developing musical material, tonal comparisons, performance techniques) of the “new tango”, with another imaginative and emotional sphere refined for him – academic concert music [1, p. 203].

The period of the composer's mature work began in the mid-1960s, which can be called the beginning of the era of modern tango. Piazzolla returns to Argentina, as he says, “with dynamite checkers in both hands”, ready to challenge the musical conventions rooted in his homeland [5]. In his works, he finally turned to the stylistic basis of tango, continued their recordings with a string orchestra, and also creates an instrumental octet (Octeto Buenos Aires), working with which allows him to defend new ideas (1955). In the organized Octet, the canons of a typical orchestra were violated (usually it is two bandoneons, two violins, a bass and a piano) and A. Piazzolla adds drums, cello and electric guitar to the traditional classical structure of the group, which had never been heard in tango compositions before. Using the experience gained from Hinaster and Boulanger, the composer experimented with tango as an artistic element of music and introduced a new general formulation of his style – *Nuevo Tango*.

These findings were perceived as a violation of the traditional style due to the impossibility of using it in dance. Despite this, the composer continued to experiment, which reflected the desire to create innovative works and arrangements, the so-called “expressionist avant-garde”. Piazzolla noted that his ensemble will “perform tango as the soul dictates, rejecting any external influences that may hinder the achievement of our goal”. A whole constellation of musicians known in Argentina cooperated with him: Enrique Mario Francini, Hugo Baralis, Leopold Federico and Atilio Stampone. The invitation of jazz electric guitarist Horacio Malvisino to the octet was an original discovery: his instrument, unusual for tango, became the “highlight” of various chamber ensembles of A. Piazzolla [2].

Among the genre-stylistic features of A. Piazzolla's instrumental pieces, one should note the frequent use of polyphonic third chords, jazz stylistics, such as the rhythmic bossa nova pattern, sequential development of musical thematic material. Harmonic complex of Astor Piazzolla characterized by certain regularities of music XX century, but with the peculiarities of the composer's style.

The innovative approach to the functioning of the “new tango” in modern musical culture was manifested in many factors. First of all, it is in a new unconventional combination of instruments: bandoneon, violin, cello, piano, double bass, guitar. This is what made it possible to consider the emergence of a new chamber ensemble in a combination of academic and folk instruments. Secondly, it is an ensemble variety for ensemble groups: quartet, quintet, octet. And most importantly, the new characteristic rhythmic structure of the accompaniment stands out in the “new tango” – features of harmonic language, which contains elements of modern compositional systems, such as the 12-tone system, elements of aleatorics, genre synthesis of jazz stylistics and the musical language of the avant-garde.

It is significant that the work of A. Piazzolla, in particular his use of new ensemble forms of music making in a new style and with a new original repertoire of the bandoneon and the guitar, which are folk instruments by their origin, became an impetus for rethinking the possibilities of folk instruments in general, their organic entry into the sphere of academic performance, search for repertoire directions, in particular in Ukrainian musical culture [4].

This process was determined by several factors. Ukrainian folk-instrumental ensemble music, the traditional genre of which was

dance samples, was able to organically adapt precisely the dance Latin American genre of tango, which in the work of A. Piazzolla received the status of classical. Namely the composer's tango in numerous arrangements – for solos and ensembles – not only entered the repertoire of folk instrumental art of Ukraine, but also became a confirmation of the ability of modern improved folk instruments (in particular, multi-timbral ready-made bayan and accordion, chromatic bandura, etc.) to convey timbre variety of those chamber-instrumental ensembles for which A. Piazzolla composed. Arrangements of Piazzolla's tango confirmed the need to expand the repertoire opportunities, to create ensemble literature for the latest chamber ensembles with the participation of folk instruments, including Ukrainian ones (bayan, accordion, bandura, etc.), in combination with classical instruments that represented new stylistic trends [8].

Among A. Piazzolla's tango compositions, “Adios Nonino” (1959) stands out as a kind of requiem in memory of his father, who gave him a bandoneon when he was a child. Therefore, the performance of the main theme of this work, which the composer always personally performed on the bandoneon in all concerts, symbolically characterized the composer's farewell reflections: “When I got back to New York a few days later, I asked to be left alone in a room in the apartment, and in less than an hour I wrote “Adios Nonino”. And then I cried as I had few times before in my life... In that piece I left all the memories I had of my dad.” [7, p. 78].

The melodic-thematic line is characterized by an active upward movement and a delay on the upper sound. In the version for the quintet, Piazzolla uses an original solution - on the delay that sounds in the bandoneon, the violin conducts a tertiary glissando, after which it uses the tambor technique typical of tango. In general, the use of this technique, which evokes associations with the noise effect of percussion, is characteristic of many works of the Argentine composer, such as “Fugate”, “Concerto for quintet”, “Four for tango” for string orchestra, and many others.

In the analyzed composition, the author uses a polyphonic writing technique - each of the instruments is endowed with an independent melodic and thematic line, which often create a counterpoint to each other (bar 103), often contrast with each other in terms of register, that leads to sound reverberation.

In the arrangement of the work “Adios Nonino” by A. Piazzolla for a duet of accordionists, Professor M. Cherepanyn prioritized emphasizing the expressive features of the accordion in the performance of an expressive musical theme. Instead, the part of the second accordion in the duet does not perform a purely accompanying role – it is a completely independent instrumental part, which is endowed with a melodic line in the bass voice and chordal harmonies. In measures 13–14 in the part of the second accordion, the signs of the musical and rhetorical figure *passus duriusculus* are distinguished, namely: the descending chromatic course of the bass is highlighted: f, e, es, d; the third descending chromatic voicing is clearly visible: f¹-a¹; e¹-gis¹; es¹-g¹; d¹-fis¹. Based on the semantics of this motive, it is obvious that the composer in this way alludes to the characteristic sphere of images, emotional state, which in musical rhetoric is associated with the themes of suffering and sorrow. Piazzolla not accidentally turned to this musical and rhetorical figure, it was not just the use of a certain template - on the contrary, it was a reflection of deep feelings. The rhythmic solution of the mentioned chromatic motif is original, expressing a syncopated shift of emphasis from a strong part to a weak one, thus creating a metro-rhythmic impulse of the suddenness of the unexpected news of the father's death.

Another work by A. Piazzolla, which clearly reveals the individual style of the composer, is “Concierto para Quinteto” (1971). In this composition, various options of textural and compositional solutions are widely presented – polyphonization of the texture, use of elements of improvisation, polychord structures. A specific feature of the analyzed work is the ostinate repetition of the bass, which evokes a stylistic allusion to the basso continuo of baroque musical writing.

In "Concierto para Quinteto", the basso ostinato serves as a background for the variational development of the musical thematic material. Therefore, the composer creates original textural solutions by figuratively drawing melodic lines in the part of each instrument of the quintet; he introduces chordal and tonal-harmonic contrasts in the process of conducting a sustained theme in the bass, and combines texturally contrasting sections, enriches polyphonic constructions with improvisation (bars 191–206).

In addition, Piazzolla's creative style is characterized by register contrast – he extreme sounds of the score form a wide range of E_1 – g^3 . The theme is performed in unison by all instruments of the ensemble – bandoneon, electric guitar, violin within the first and second octaves.

A special importance in the music of A. Piazzolla (in the Nuevo Tango genre) belongs to rhythm. Most often in his works, such as "Seasons in Buenos Aires", "Adios Nonino", "Years of Solitude", "Fugate", "Concierto for Quintet", and others, the rhythmic pattern of dotted quarter – dotted quarter – quarter is found. Also, in the author's compositions, we find various variants of rhythmic formulas – some transformed from the rhythms of Latin American music, while others are rearranged from traditional tango. Thus, A. Piazzolla, in search of expressive means of "new tango" music, turns not only to the traditional rhythmic models of tango, but also experiments, creating a kind of synthesis of rhythmic structures characteristic of his author's style.

It should also be noted that Piazzolla resorts to quoting heterogeneous musical material in his musical works, using the technique of polystylistics, which is an immanent feature of the musical art of the 20th–21st centuries. These are, in particular, the works "Street Tango", "Winter" from the series "Seasons in Buenos Aires" and others.

The outstanding work "Libertango" is a composition in the Tango Nuevo style, recorded and published in 1974 in Milan. The name comes from the merging of the words "liberty" (Spanish Libertad) and "tango" (symbolizing the transition of A. Piazzolla's work from classical tango to Tango Nuevo). In general, the piece is written in the form of variations on basso ostinato, where the bass and repeated chords are the basis for improvisation.

"Homage à Liège double concerto for bandoneon and guitar with orchestra" by A. Piazzolla (1984) is very popular among performers. The work is characterized by textural diversity. The musical fabric of this piece consists of arpeggiated figurations, sometimes scale-like passages, intervals and chordal sequences. The concert became an important stage in the formation of this academic genre for folk instruments accompanied by a symphony orchestra.

The beginning part "Introduction" (e-moll) is based on the soloists' alternate performance of the theme, the background of which is the altered chords. The Doric mode used by the composer gives a peculiar flavor to the sound. The second part – "Milonga" – is distinguished by a rich tonal plan. The priority in conducting musical and thematic material belongs to the guitar. First, the theme sounds in the key of e-moll, later there is a deviation to the key of the subdominant, after a guitar cadence with further modulation in h-moll. The texture of this part is mainly figurative. The third part of "Tango" (h-moll) begins with the bandoneon. The guitar performs an accompanying function and sometimes emphasizes the bandoneon part, creating a kind of counterpoint to it. In general, the chordal texture also contains figurations of the toccata type and chromatic movements.

The appearance of this work was another contribution of the composer to the rethinking of the role and possibilities of the instrument of folk origin, its new academic role, in particular, not only in the chamber ensemble, but also in the accompaniment of the symphony orchestra [13].

Among the original works of A. Piazzolla, there is the ensemble composition "History of Tango" ("Histoire du Tango") for flute and guitar (1986). Today it is also known in many transcriptions for other ensembles – violin and guitar, flute and harp, flute and piano, etc. (performed by the composer himself), but most of them are performed in the original version.

The composition "History of Tango" consists of four parts, each of which takes listeners on a kind of journey to the past, therefore, appeals to the suite form. The episodes reveal the peculiarities of different periods of the historical development of tango, stylistic specificity and social conditions of existence.

While the first parts relate to the earlier and canonical periods of the dance's existence, the third and fourth characterize A. Piazzolla's unique style and his contribution to the music of the second half of the 20th century as the creator of the "new tango".

The first part, entitled "Bordel 1900", is provocative in its plot – it depicts the atmosphere of dubious establishments of the beginning of the 20th century, where tango served as a background for teasing communication between women of different ages and visitors of these dens – thieves, sailors, etc. To recreate this unique atmosphere, the composer uses passages of improvisational plan performed in rubato by a solo flute, "percussive" guitar chords that emphasize the rhythm.

The metro-rhythmic pattern of the guitar accompaniment evokes stylistic allusions to the habanera. Whimsical, rhythmically rich passages of the flute are complemented by an expressive part of the guitar, which is full of depictive effects – it imitates the clapping of the palms, the knocking of the heels (hitting the soundboard), and in terms of content, it plays the role of an entire orchestra. It covers a fairly significant range – from the lowest sounds to the upper tessitura due to octave flageolets. According to its structural characteristics, the first section of the suite appeals to a three-part form, which successfully embodies a kind of fireworks of emotions from light flirting to passionate provocations.

Unlike the first moody and sensual part, the second – "Cafe 1930" – is perceived more as music for listening than for dancing. Let us note that at that time tango music under the influence of jazz and new styles was intended mainly for listening. Therefore, its tempo slows down, more attention is focused on the romantic melody in both the guitar and flute parts. This section is a kind of "suite within a suite", consisting of several episodes contrasting in character (lyrical-contemplative or melancholic-exciting) and tonal-temporal plan.

"Cafe 1930" opens with a wistful guitar solo filled with lyrical arpeggios throughout the instrument's range, enriched by chords and melismatics. Then, it is replaced by a sad and expressive flute melody that sounds against the background of the guitar accompaniment. In general, this part is characterized by numerous author's tempo and agogic markings (accelerando and rallentando), as well as ad libitum sections, which create performance space for one's own interpretation and give the composition features of improvisation.

It should be noted that namely in "Cafe 1930" the guitar part is extremely rich both melodically and texturally. It is filled with numerous solo episodes, mini-cadences, and various rhythmic constructions. Guitar and flute are equal participants. Their ensemble evokes associations with interaction and opposition (unity and struggle) of female and male dance parties, which have their own line, while at the same time synthesizing in a single emotional flow.

It should be especially emphasized that the guitar part is interpreted by the composer as a kind of first-person narration, as a memory or reflection, which is indicated by the deep melodic passages. It contains elements of imitations and double bass passages, as well as cello melodies, and rhythmic percussion elements, alongside traditional arpeggiated guitar chords or extended passages.

The genre-stylistic specificity of the third part – “Nightclub 1960” – consists in the organic synthesis of Argentine tango and Brazilian bossa nova. Tempo deciso (decisive) gives tango an active movement. The following slow constructions, which contrast the first one and its subsequent repetitions, from bar 27 are marked with the author’s remarks *lento*, *molto cantabile*, *tristemente*. They emphasize the character of the flute part, which is close to a sad, even mournful song. In general, the contrast of the episodes of the piece embodies the richness and variety of styles inherent in this historical period and evokes associations with the fluidity and changeability of life episodes of a person’s life.

This part, like the previous one, is characterized by freedom of performance and improvisation of both parts, which is close to projections of dance drawings of the soloists, that in the last part will come together in a dramatic finale (in unison sound of instruments).

The musical language of the “Concert d’aujourd’hui” finale (*Presto*, *molto ritmico*) is full of extratonal complexes, eccentrically chromatic flute melodies with shifted accents and jazz-improvisational elements. The guitar part is based on an ostinate glissando figure, which serves as a constant in the dynamic unfolding, depicting stability in the flow of movement. The part ends with the unison octave sound of the instruments, full of expression and dynamic growth. The simultaneous combination of performing techniques – glissando of the guitar and *frulato* of the flute – testifies to the renewed symbols of tango in the modern world.

In general, “The History of Tango” is an extremely illustrative work, and its modern interpretations almost always take place with the use of theatrical productions, dance additions, video broadcasts, etc. The composer’s choice of two instruments – the flute and the guitar – as two participants in the dance, as two creators of the dance mystery, is also projected onto the two guises of tango, namely choreography and music.

The creativity of A. Piazzolla in the interpretation of Ukrainian and other performers on folk instruments

At the current stage, the music of the Argentinean composer is gaining increasingly more popularity in many countries of the world, and in the last twenty years in Ukraine as well. It sounds in concert halls, in sound recordings, it firmly entered the pedagogical and competition-festival repertoire. The popularity and recognition of A. Piazzolla’s work has been confirmed in many international competitions and festivals in various countries of the European and American continents. His works were included in concert programs by world musicians of both the chamber-academic direction and the academic folk-instrumental direction, in particular, bandoneonists – P. A. Glorvigen, L. D. Matteo, D. Zaluzzi, A. Borda, D. Y. Mozalini, N. Marconi, D. Cabrera, D. Binelli, V. Sabatier; accordionists – (bayanists) V. Beltrami, E. Marini, R. Galliano, F. Lips, Yu. Shishkin; violinists – Antonio Agri, Fernando Suarez Paz, Gidon Kremer; cellists – Mstislav Rostropovich, Yo-Yo Ma, K. Rodin, V. Tonkha; guitarists – Cacho Tirao, Baltazar Benitez, Assad brothers duet, El Di Meola; jazz improvisers – Jerry Mulligan (saxophone), Gary Barton (vibraphone), Phil Woods (saxophone); pianists – Emmanuel Ax, Arthur Moreira Lima, Daniel Barenboim, and others.

In addition, A. Piazzolla’s work has organically entered the repertoire of chamber ensembles – *Intime Quintet*, *Novigaro Quintet*, *Viljamaa-Juhola* (Finland), *Quintetto Accento* (Austria), *Neofonia*, *The Saxophones*, *Alma Dancante Jazz sextet*, *Cronos Quartet* (Italy), *Baltic International Quintet* (Lithuania), national symphony orchestras of Colombia, Costa Rica, Panama, USA, Argentina, Great Britain, Italy, Poland, and other countries. Interesting and extraordinary arrangements of the composer’s work were also represented by world-class singers – tenors Placido Domingo and Jose Carreras; pop singers M. Mathieu, D. Morgan; as well as choreographers-ballet masters M. Plisetskaya, A. Mayorov, A. Sigalova, D. Dikumar, A. Shoshin, and others.

The famous Ukrainian accordionist Vyacheslav Samofalov (born in 1963) became an arranger of the music of A. Piazzolla and other composers for the ballet “Stories in Tango Style” (2018), choreography by A. Shoshin, production of the Kyiv Municipal Academic Theater of Opera and Ballet for Children and Youth.

Many Ukrainian soloists and ensembles (of academic and jazz performance directions) include A. Piazzolla’s works in their concert programs and musical projects both in the original version and in the author’s arrangement. Among the famous performers of the Argentine composer’s music on the bandoneon, there is Honored Artist of Ukraine I. Sayenko, as well as accordionists and bayanists: People’s Artists of Ukraine Ye. Cherkazov and V. Murza, Honored Artist of Ukraine V. Zubitsky, I. Syrotyuk, I. Zavadsky, and also duets (honored artists of Ukraine Bohdan and Ruslan Pirogy, duet of accordionists Concertino (M. Cherepanyn, M. Bulda)), chamber-instrumental ensembles (Dzherelo ensemble (directed by E. Cherkazova, accordion, domry, kobza-bass); duet E. Cherkazova – accordion, G. Nuzha – cello; Kyiv Trio (People’s Artist of Ukraine V. Samofalov (bayan), K. Bondar (violin), M. Vikhlyaeva (piano), Yergiev Family Trio (bayan, violin, piano), Risol Quartet (leader I. Sayenko), Melody Quintet (leader V. Vyazovskiy), Kiev Tango Project tango orchestra (founder and violinist K. Sharapov), Quattro Corde string ensemble (artistic director A. Prykhodko), and others).

One should also note three brilliant tangos by A. Piazzolla: “Extasis”, “Made in USA”, and “La calle 92” in a wonderful performance by the Ukrainian duet – the famous virtuoso guitarist Mark Topchii and the domrist Natalia Geri [12].

A. Piazzolla’s piece “History of Tango” (“Histoire du Tango”) for flute and guitar has entered the repertoire of many Ukrainian collectives, such as the ensemble of the Khmelnytskyi Regional Philharmonic “FLAUTANDO” consisting of laureates of international competitions Taras Malik (flute) and Maksym Zavodny (guitar), soloists of the National Philharmonic of Ukraine, honored artists of Ukraine Andriy Ostapenko (guitar) and Yuri Shutko (flute), in particular, to the program “Musicians’ Conversation”.

In general, arrangements of A. Piazzolla’s works are included in the repertoire of many soloists and ensembles – performers on folk instruments (mixed composition), as well as for a combination of folk instruments (bayan, bandura, domra, guitar, cymbals) accompanied by a piano. In addition, the author’s compositions are also arranged for folk-instrumental ensembles of a homogeneous composition with the involvement of soloists of melodic instruments (flute, accordion, saxophone, etc.) and percussion [3].

A. Piazzolla’s work “Libertango” was included in the repertoire of the famous duo “B&B Project” (Bandura and Button accordion) consisting of Tetiana Mazur and Serhiy Shamrai, who perform numerous popular compositions in translation for such an ensemble, destroying stereotypes about the nature of the repertoire for folk instruments.

Piazzolla’s double concerto for bandoneon and guitar has also been actively reinterpreted by Ukrainian musicians today and sounds in an arrangement for bandura, accordion, and piano (Dmytro and Anastasia Varfolomeeva, Tetiana Motorna – Odesa), bandura, accordion and chamber orchestra (duet “Dialogues” – Igor and Nadiya Evenko, and chamber orchestra “Harmonia nobile” – Ivano-Frankivsk), and others.

In Castelfidardo (Italy) – a city in which since the 19th century, accordions are produced and which is home to the oldest accordion museum, the ACCORDION INTERNATIONAL PRICE CASTELFIDARDO international competition has been held annually since 1975. On the occasion of the composer’s 100th birthday, A. Piazzolla’s bandoneon, restored by the city’s craftsmen, was presented at the competition, which sounded at the competition’s concerts. The international competition ASTOR PIAZZOLLA is also held in the same city. Its winners

were Ukrainian musicians – accordionist quartet “Rizol”, accordionist Vyacheslav Samofalov.

In 2021, in honor of the 100th anniversary of the birth of A. Piazzolla, an international online competition of soloists and ensembles (Piazzolla Music Competition) was held. The competition jury included GRAMMY-winning pianist, composer and former member of the legendary Astor Piazzolla Quintet Pablo Ziegler (chair), GRAMMY-winning bandoneonist Hector del Curto, and GRAMMY-nominated bandoneonist/composer Daniel Binelli. Performers from all over the world took part in the competition – bandoneonists, accordionists, pianists, guitarists, violinists, ensembles of various compositions, soloists accompanied by symphony orchestras. The main requirements of the repertoire were original and arranged works of the composer, which contributed to a new wave of actualization of his work.

Among the finalists of the competition, there were Ukrainian musicians – the duet Kandinsky (Sofia Syliayeva (guitar) and Daria Zernova (flute), graduates of the National Academy of Music named after P. Tchaikovsky (Kyiv), who are studying in Germany).

In the process of understanding the performance interpretation of A. Piazzolla’s work, attention should be paid to the identification of the components of his compositional style and the definition of its characteristic features. Among such elements or components of style, which should be paid attention to in the process of stylistic analysis of a composer’s musical work, one should consider ideological-aesthetic, thematic, content-figurative, genre aspects, as well as composer’s musical language (including texture and harmonic organization), artistic methods of shaping (development of intonation) [10, p. 191]. The performers consider the interpretation of Piazzolla’s composer’s works from the standpoint of synthesizing the development trends of Latin American musical culture and the peculiarities of their own national culture, which is represented by means of folk instruments.

The active use of Piazzolla’s works for modern folk instruments testifies to the neo-folkloric trend, which manifests itself not only in the work of composers, but also in the search for original works for translation (arrangement) using folkloric-based musical themes belonging to other ethnic cultures [11, p. 72].

It should be noted that the work of A. Piazzolla led to numerous composer reflections. Thus, Argentine classical guitarist and composer Maximo Diego Pujol, under the influence of the “History of Tango”, wrote a work called “Suite Buenos Aires” (1995), which is structurally and in its intonation close to its prototype.

The famous Ukrainian composer V. Zubitsky (born in 1953) in honor of the composer wrote “Omaggio ad Astor Piazzolla” (“Dedication to Astor Piazzolla”) – a concerto for accordion and chamber orchestra (1999), in which quotes from “Libertango” of Piazzolla are used. Both the accordion and the bandoneon are related instruments, and the work of V. Zubitsky and A. Piazzolla are united by the virtuosity of performance, bold creative searches of a genre, form-creating, expressive nature.

“Omaggio ad Astor Piazzolla” uses the synthesized rhythm of Piazzolla’s works (a combination of syncopated and clearly metrical movement), as well as the soloist’s singing of the “Libertango” melody as the emotional climax of the work. The interpretation of the work is characterized by exquisite concert theatricality and elements of jazz improvisational music [7]. The work is saturated with numerous author’s nuances, which contribute to the maximum approach to the stylization of A. Piazzolla’s work: *fingers* – clicking with the fingers, *be of keyboard* – striking the keyboard, *rimshot* – rhythm in the jazz style of performance, *swing* – playing with rhythmic rocking, etc.

V. Zubitsky’s work “Omaggio ad Astor Piazzolla” is widespread in many author’s instrumentation and arrangement options (in particular, for accordion and folk orchestra, accordion and

symphony orchestra, accordion and piano, etc.). Its popularity attests to respect for the Argentine composer, constant interest in the interpretation of his work. At the Sixth International Competition of Bayanists-Accordionists “Kryvbas Cup” (2006), V. Zubitsky’s composition “Omaggio ad Astor Piazzolla” was widely represented in the participants’ repertoire.

4 Conclusion

The work of Astor Piazzolla, one of the outstanding composers of the 20th century, represents the invaluable heritage of the treasury of world musical culture. Based on the sources of national Argentine music, he modified the popular dance genre of tango into one of the academic ones. Having created the *New Tango*, the composer managed to preserve its authenticity, national specificity, figurative and dramatic richness, impressive melodiousness and penetrating music.

The performance of Piazzolla’s works requires from the musician a universal training: mastery of academic and jazz manners of playing, clear and accurate reproduction of the rhythmic structure, articulation, accented sound production, theatrical ‘reincarnation’ of the author’s idea, flexible intellectual thinking, which is manifested in the ability to subjugate musical form and complex means of expressiveness to revealing the figurative sphere of the work. These skills are actively developed by performers on bayan-accordion, bandura, cymbals, in various ensembles, synthesized spectacular projects in Ukraine and the world.

The musical work of A. Piazzolla became a vivid and original phenomenon of the world musical culture of the 20th–21st centuries in general, and significantly influenced the rethinking of the possibilities of folk instruments as academic and concert instruments.

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FORMATION AND TRANSFORMATION OF WOMEN'S IDEAS ABOUT MATERNITY BEFORE AND AFTER CHILDBIRTH: SOCIAL-PSYCHOLOGICAL ANALYSIS OF FACTORS (BASED ON THE DATA OF UKRAINE)

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Abstract: The article is devoted to the study of women's ideas about motherhood before and after the birth of a child. The general psychological theory of attitude and the dispositional theory were used as a theoretical and methodological basis. The empirical basis of the article is represented by the results of a study (online survey) conducted by the authors (adult women (18 years old and above) who have experience of motherhood were interviewed; n=198). According to results of the study, discrepancies were found in women's ideas about motherhood before and after the birth of a child, and the study allowed determining the main factors of the formation and transformation of women's ideas about motherhood. It is concluded that in order to avoid significant problems at the stage of realization of motherhood, it is necessary that ideas about motherhood are formed on the basis of an objective situation, as well as objective facts (and not dreams, myths, images, and stereotypes). According to the authors, this will be facilitated by the implementation of a thorough system of social support for motherhood, the development and implementation of a program of psychological measures aimed at preparing a woman for motherhood, with taking into account the specifics of restructuring her life after the birth of a child.

Keywords: motherhood; social stereotypes; social attitudes; ideas about motherhood; idealization of ideas about motherhood; transformation of ideas about motherhood, psycho-emotional state of the mother.

1 Introduction

Even before the birth of a child and in the process of carrying it, every future mother has certain expectations regarding it (the child's appearance, character traits, etc., as well as how they will interact, communicate, and spend time together. If a woman is expecting a child for the first time, then, as a rule, all her expectations are based mainly on stereotypes existing in society, which distort and simplify the real picture of motherhood. In general, it should be noted that the field of motherhood is one of the most associated with stereotypes. According to O. Strelnyk, doctor of sociological sciences, these stereotypes are spread by modern media and to a large extent idealize the idea of motherhood. She notes: "...The long-standing idealization of motherhood leads to the demonization of motherhood, when mothers themselves begin to say that motherhood is exclusively stressful... The truth is always in the middle. Life experiences are very diverse, they are never purely black or purely white... Such idealization harms women because they are faced with the fact that they are not as perfect mothers as they thought they could be..." [6].

Through mass media and communication, society imposes the opinion that a child and its needs are the most important thing in a woman's life, that children are a priori happiness. However, the realities are such that when a woman gives birth, taking care of the child, she gets very tired, sleeps poorly, is dissatisfied with her appearance and quality of life in general, so she does not feel happy at all. This causes feelings of guilt and frustration. Therefore, a kind of protest is forming among the female part of society, which can manifest itself in significant (dangerous for the health of the woman and her child) postponement of motherhood, conscious refusal of motherhood, etc.

In view of the above, the purpose of this article is to theoretically substantiate and empirically investigate the differences in women's perceptions of motherhood before and after the birth of a child, to determine the main factors of the transformation of these perceptions.

2 Materials and Methods

In the theoretical part of the work, general scientific methods of analysis and synthesis are used. As a basis for the theoretical substantiation of differences in the expectations and perceptions of women before and after the birth of a child, the general psychological theory of attitude and the dispositional theory were used, the developers and supporters of which paid special attention to the study of the role of social attitudes, in particular the reproductive attitude. The empirical part of the article presents the results of an online survey conducted by the authors using a Google Forms questionnaire (December 2021 - January 2022). Adult women (over 18 years of age) who have experience of motherhood acted as the research object. The data table obtained as a result of the online survey was adjusted and adapted to the format of computer processing in SPSS, which made it possible to not only to analyze one-dimensional distributions by characteristics, but also to apply the methods of cluster and comparative analysis.

3 Results and Discussion

Individual and group expectations are closely related to social stereotypes and attitudes. Social stereotypes and attitudes as socio-psychological phenomena were studied by such scientists as R. Abelson, S. Breckler, A. Greenwald, G. Allport, D. Prentice, A. Pretkanis, and others [1; 2; 8]. The works of T. Newcom are also devoted to the study of social attitudes - he believes that social attitudes are based on the consent of the subject to consider certain objects or situations through the prism of social norms and values [21, p. 111]. Ukrainian psychologists V. Bosnyuk, S. Kucherenko, S. Sklyarov, Yu. Yurina, and others paid attention to consideration of attitude as an evaluative relationship to social objects [4; 13; 31].

The study of the reproductive attitude, as a kind of social attitude, is based on the achievements of the schools of D. Uznadze, V. Yadov, and G. Akopov [18; 20]. According to A. Belyaeva and O. Nagula, it is important to develop constructive parental attitudes in young people even before the birth of children. Measures for the development of parental attitudes should be aimed at understanding the structure, properties, and socio-psychological factors of the formation of parental attitudes, developing constructive communication skills, in particular, in the distribution of family and parental responsibilities, optimal resolution of conflict situations in the family, consolidation of effective models of behavior in the family microenvironment [3, p. 15].

As for the topic of preparing a woman for childbirth and raising a child, it is largely represented by medical and medical-psychological aspects of motherhood in the scientific works of such authors as V. Abramchenko, O. Arzhanova, L. Baz, O. Bazhenova, O. Bailyuk, V. Brutman, K. Voronin, N. Danylenko, O. Ishchuk, K. Kimova, Yu. Malyovana, O. Rogachevskiy, M. Radionova, O. Tiunova, G. Filipova, and others. The pre- and postnatal conditions of women were studied by such Ukrainian and foreign scientists as L. Altshuler, V. Barth, J. Zuckerbrough-Miller, M. Mazo, R. Suri, N. Tatarova, V. Ushakova, L. Faerbanks, G. Shamanina, etc. [26; 27; 28].

A significant contribution to the development of scientific ideas about the phenomenon of motherhood was made by the Ukrainian scientist O. Strelnyk. In her scientific works, she demonstrates the variability of motherhood practices in a socio-historical dimension, investigates changes in the socio-demographic characteristics of the modern type of motherhood, outlines the contradictions between these changes and the policy of motherhood support in Ukraine, analyzes the macrostructures of motherhood practices in modern Ukrainian society, represented by state policy, the labor market and sociocultural meanings of motherhood, etc. [25, p. 71].

In view of the problem raised in this article, the study of Danish scientists L. Mortensen, H. Hegaard, A. Andersen, and J. Bentzen deserves attention. They conducted a survey (by questionnaire) of 863 women aged 20 to 40 (Denmark). The questions of the questionnaire were aimed at identifying intentions and attitudes towards creating a family, knowledge about the birth of a child, etc. According to the results of this study, the majority of women indicated that motherhood was definitely important, that they hoped to have two or three children, while about half of the respondents intended to have their last child after age 35. However, they noted the following as the most important prerequisites for creating a family with children: living in a stable relationship; graduation; stable and high financial situation; the presence of a workplace that can be preserved at the birth of a child. In other words, the majority of female respondents noted that they need sufficient social prerequisites and guarantees for the birth of a child [15, p. 470].

The problem is that society is arranged in such a way that the average woman can reach the social status that provides for sufficient social conditions and guarantees at about 38-39 years of age, and, therefore, women either postpone motherhood or decide not to give birth to children at all. The other side of the problem is manifested in the fact that after the birth of a child, certain positive expectations of a woman do not find real confirmation. There is a mismatch of ideas, expectations, and reality, which negatively affects the emotional and mental state of the mother. Under the pressure of social stereotypes and own ideas that are formed, including under the influence of the older generation, the mother feels guilty that she “wrongly” raises, feeds, dresses, cannot calm the child, etc. Along with this, the causes of fatigue and sadness, which are characterized by a moderate decrease in mood, emotional lability, vulnerability, tearfulness, devastation, can be the peculiarities of the course of pregnancy and childbirth, the presence of endocrine disorders, toxicosis of pregnancy, physical immaturity and psychological unpreparedness for pregnancy, childbirth, and motherhood in general.

Also, the reasons for the motivation of young women regarding the birth/refusal of a child, the issues of forming ideas that would combine the foundations of the mother's role as an essential existential phenomenon which carries a positive sign, with the real situation occurring at birth of the child with all its positive manifestations and problems, are still not sufficiently revealed and researched.

The presence of the above-mentioned “gaps” in scientific knowledge necessitates a more complete theoretical justification and empirical study of the discrepancy between the expectations and perceptions of women before the birth of a child and their real psychological state after the birth of a child, including the transformation of perceptions about motherhood.

Women's psychological readiness for childbirth is determined by the peculiarities of the formation of maternal identity, psycho-emotional perception and course of pregnancy, as well as the intra-role structure of the family. In the subconscious of many women, especially before the birth of their first child, they form their own ideal picture of motherhood, which includes an idea of what her life will be like after the birth of a child, what kind of mother she will be, how she will raise and care for the baby, reflecting rather the desire of the mother than the future reality, which we considered in more detail in our previous work [5, p. 121].

A concept related to the system of ideas about motherhood, but not synonymous with it, is the concept of readiness for motherhood, which is more widely represented in psychological research. In particular, K. Lorenz, R. Shoven, X. Montane, and others devoted their scientific works to the study of the state of the mother's psycho-emotional sphere and psychological readiness for motherhood. Among Ukrainian scientists, V. Vyshniiovskiy, O. Ishchuk, L. Loboyko, N. Yaremchuk, and others are investigating similar conditions [9; 14; 29; 30]. If to synthesize the conclusions of the researchers listed above, then psychological readiness for motherhood can be interpreted as a

specific personal formation, the leading component of which is the subject-object orientation in relation to the unborn child. This attitude is projected after the birth of the child into actual maternal behavior and determines its effectiveness.

E. Badinter takes a different position, as noted by the Ukrainian researcher M. Neroba in her scientific article “Motherhood as a psychological phenomenon” [19, p. 92]. The article states that Badinter traced the history of maternal attitudes for four centuries and came to the conclusion that the so-called “maternal instinct” is a myth. The researcher did not find any trends in the behavior of women that would serve as evidence for the presence of a maternal instinct. Moreover, she revealed excessive variability of women's feelings towards children, depending on culture and ambition. As M. Neroba concludes, “...motherly love is a concept that is filled with different meanings in different periods of history. A woman becomes a better or worse mother depending on whether motherhood is valued or devalued in society” [19, p. 93].

The results of various studies devoted to the investigation of the features of ideas about motherhood confirm the value of motherhood as an individual characteristic for a young woman. The desire to become a mother is the most complex need of a woman, which is determined by the reflection of the woman's own conditions and the desire to experience them in the process of interaction with the child. The image of the future child, one's own experience, family and traditional models of motherhood are involved in the development of maternal feelings. The idea of “maternal feeling” sometimes has a tinge of disappointment due to the discrepancy between the real experience and the imaginary one. In any case, dreams, desires, and attitudes significantly affect the overall perception of parenthood and are a strong motivating factor. The image of the mother is a complex mental formation, which is a representation of the projection of value-semantic and qualitative characteristics of maternal behavior in the consciousness, as well as world perception, presented at different levels of a hierarchically defined system of reflection: perceptual, conceptual and amodal [5, p. 123].

In her research, V. Kramchenkova comes to the conclusion that women are guided by values that are traditionally considered “typically feminine” and ensure compliance with socially stereotyped requirements for women. So, an ideal woman should be soft, tolerant, obedient, guided by the principles of a man [11, p. 41; 12, p. 330]. O. Kocharyan and Yu. Svyrenko in their article emphasize the psychological aspects of the concept of reproductive attitude and its understanding [10, p. 125]. Psychologist N. Romanenko singles out five main stages of the formation of maternal feelings, noting that this is a complex process, the course of which depends on many factors: genetic; biological; family environment; social sphere. She also notes that motherhood includes evolutionary aspects, has cultural characteristics and individual ontogenesis. According to N. Romanenko, the first stage of the formation of maternal feeling is the “lessons” that a girl learns from her mother, even in the prenatal period. The second stage is related to the play period in the girl's life. The third stage – “nursing” - begins at about 4.5-5 years and ends at the beginning of puberty. The fourth stage - the differentiation of the maternal and sexual spheres - coincides with the period of puberty. The fifth stage is interaction with own child, when own children appeared. The girl grew up, she had her own children. This period begins even before significant changes begin in the body of the expectant mother and continues until the end of life [22]. At the same time, E. Shcherban proves that there is a strong idealization of expectations regarding motherhood, deprivation term of everyday element and saturation with remnants of professional knowledge. The absence of a domestic element in the image of motherhood can be explained, among other things, by the general tendency of women to leave the household to ensure professional and personal fulfillment, which is very powerful in modern society [23]. This conclusion resonates with our opinion on the idealization of women's ideas and expectations about motherhood, and also finds confirmation in the scientific works of L.L. Mortensen, H.K. Hegaard, A.N. Andersen, J.G. Bentzen, in which it is noted that women who are

focused on professional development and careers are aware of the incompatibility between professional employment and responsibilities for raising children [15, p. 480].

After the birth of a child, many factors affect the mother's psychological state (state of health, course of childbirth, support of loved ones, material condition, peculiarities of the child's health), including the formed system of ideas about motherhood. Postpartum mood disorders cover the period of childbirth and the first months after it. It is believed that they affect 70% to 80% of women. More than 50% of women have violations of the mother-child relationship. And to a large extent, the reason for this is the inconsistency of the formed model of ideas with reality [7].

Thus, it can be concluded that the following remain understudied: psychological factors of a woman's readiness to give birth to a child and care for it; the ratio of ideas about motherhood formed before childbirth and postpartum reality; peculiarities of a woman's psychological adaptation to new conditions associated with motherhood; transformation of ideas about motherhood.

In view of the above, we conducted our own empirical research aimed at identifying differences in women's perceptions of motherhood before and after the birth of a child, as well as attitudes toward motherhood in general (vision of the meaning of motherhood, perspectives of own motherhood, etc.). The research was conducted using an online survey with a questionnaire created in Google Forms. Adult women (over 18 years of age) who have experience of motherhood acted as the research object. Data collection took place between December 15, 2021 and January 15, 2022. In total, we managed to interview 198 women aged 20 to 68. The sample is random, non-representative. The announcement about conducting the research was posted on social networks, every woman over 18 could answer the questions of the questionnaire. Undoubtedly, the specified sample size is insufficient for the general population represented by all adult women of Ukraine. Let us note that our research was of a pilot nature, it involved approbation of the tools, as well as the identification of important trends, which can serve as a basis for conducting a further larger representative survey.

The main block of the questionnaire was represented by questions about the respondents' ideas about motherhood before and after the birth of a child. The questionnaire provided an opportunity to explore changes in these perceptions. The questionnaire included questions aimed at finding out: the level of readiness and attitude towards motherhood before the appearance of the first child; factors in the formation of ideas about motherhood; influence of others' opinions on decision-making about motherhood; the level of coincidence of formed ideas about motherhood with the realities of life after the birth of a child; the biggest difficulties that a young mother had to face after the birth of a child, which she did not imagine before the birth of the child; to whom a woman could turn for help in difficult situations related to the birth and upbringing of a child; the most difficult period of motherhood; differences when expecting the first and subsequent children; the meaning of motherhood; social roles that a woman considers most important for herself. In addition, we specified women's number of children, marital status (whether they are married), professional employment, and some other socio-demographic characteristics.

Regarding the number of children among our respondents, 67.6% of respondents have one child, while all others have more than one child (age of children is 3 months and older). About 70% are married. Regarding professional employment, 50.2% are women who work as hired workers, 11.7% are self-employed, and 38.1% are on parental leave.

The results of the online survey make it possible to determine the main trends in the perceptions and expectations of women regarding motherhood and to draw the following conclusions.

Analyzing the general readiness for motherhood, it can be noted that approximately 72% of the surveyed women believe that they were ready for motherhood, while 16% believe that they were not ready for it to one degree or another (see Figure 1).

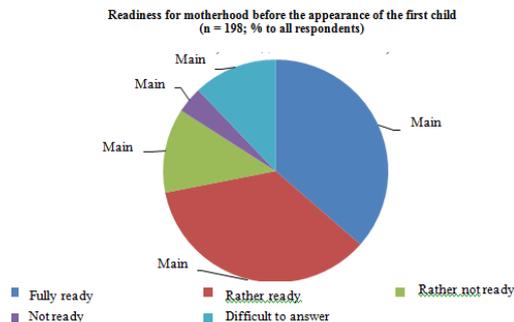


Figure 1. General readiness for motherhood

Let us note that the percentage of women who hesitated to give an exact answer to this question is very noticeable. In our opinion, such hesitancy can also, to some extent, mean not full readiness for motherhood. Thus, we can say that quite a large part of our respondents experienced certain complications in making a decision about motherhood, the reasons for which require a more thorough analysis, which we will carry out below.

As for the meaning of motherhood, the responses were distributed as follows: 64.2% answered that motherhood for them is "an expression of love and care towards a child, which is inherent in a woman by nature itself"; 11.7% of women believe that a woman should simply have children "for happiness", choosing for herself the generally accepted model of female behavior in society. A total of 24.1% of women named other "meanings", such as: "transferring their knowledge and life experience"; "give the child what she could not get in her childhood"; "fulfillment of social and family duty"; "education of an independent person". It can be noted that despite slightly different views on the meaning of motherhood and their overall positive orientation, those that correlate with generally accepted stereotypes about the role of women in society prevail, which confirms our assumptions about stereotypes' significant influence on the idea of motherhood.

In order to analyze the factors that influenced women's perception of motherhood, we asked respondents what they themselves think about this matter (it was suggested to choose no more than three answer options). The majority of women (44.3% of respondents) believe that their ideas were formed on the basis of their own childhood experiences (taking care of siblings, observing parents, etc.); 36.3% of women believe that their ideas were formed on the basis of their own dreams. Another 37.7% are sure that their ideas are based on the literature they read, Internet sources, the experience of friends and acquaintances who already have children in their families.

From this distribution of answers, it can be assumed that a little more than a third of women are consciously preparing for motherhood by reading educational literature, attending childbirth preparation courses, and watching video materials on raising and caring for a child. All others rely either on their own subjective dreams or no less subjective childhood experience, which can lead to further problems with the discrepancy between ideas and reality.

Making a decision about motherhood is one of the key indicators of readiness for it, especially at the psychosocial (readiness of the couple as a separate system, planning the restructuring of their social life) and psychophysiological (emotional, motivational readiness) levels. In this regard, we asked women about the factors that influenced their decision on motherhood (it was suggested to choose no more than three answer options). Thus, 60.4% of women noted that their own opinion regarding planning the birth of children was most important; 40.2%

admitted that the husband's opinion had great weight. It is also important for most women to understand that the difficulties of motherhood and child care fall primarily on her shoulders. As for the opinion of others (parents, friends, colleagues, etc.), for 44.1% of women their opinion did not matter much, and for 35.9% it did not matter at all. So, we see that in the matter of having a child, a woman listens, first of all, to herself, her capabilities, feelings and to the opinion of her husband, as the future father of the child. This conclusion is also confirmed by the distribution of answers to the question "Who can you turn to in difficult situations related to the birth and upbringing of a child?" (it was suggested to choose all possible answer options). The results show that 68.5% of respondents answered – "to their husband" and 60.3% - "to their parents". That is, in the implementation of motherhood, women mainly count on themselves and the closest people.

So, we observe a fairly high level of preparedness of the interviewed women for motherhood (at least, at the level of self-evaluation), most of them have ideas about motherhood formed on the basis of childhood experience (taking care of younger brothers and sisters, models of parental behavior of significant adults), based on own dreams. That is, the ideas are based to a greater extent on the subjective perception of motherhood and parental roles. Slightly more than a third of women are consciously preparing for the role of mother, based on objective facts (literary sources, informative articles on the Internet, etc.). It can be assumed that those women who formed an idea about motherhood based on subjective experience and their own dreams are not prepared for reality.

Regarding the (non)coincidence of ideas about motherhood before and after the birth of a child, the answers were distributed as follows: 32.2% of respondents believe that the ideas completely coincide; 47.6% believe that the ideas rather coincided, but there are still certain differences; 20.2% of women noted that the ideas either did not match at all or only partially matched. For 36.4% of women, the first month after the birth of a child was the most difficult, which is associated with a woman's adaptation to the new role of mother, as well as the process of physiological recovery after childbirth. For 55.6% of women, the most difficult period was the first year after the birth of a child, when there is a dynamic adaptation to new living conditions with a child and intense psychophysiological changes in the child. Also, 8% of women answered that the most difficult period was the age of the child from 1 to 3 years. Respondents who have 3-4 children gave this answer more often. We assume that this position is related to their greater experience of interacting in a family with several children of different ages. The need to take care of older children at the same time makes it much more difficult to pay enough attention to the younger child, who is beginning to be intensely interested in the environment.

Among the respondents, 40.1% noted that the biggest difficulty for a woman who has become a mother is her physiological recovery after childbirth. Respondents who gave birth to a child for the first time are surprised to note that the recovery process seemed quite long, that they did not imagine it would be so difficult. Moreover, 30.5% noted that chronic fatigue and lack of sleep became a problem for them. For 27.3% of respondents, the most difficult were the problems of household organization; 1.9% hesitated to give an exact answer to this question, or wrote their own specific reasons (for example, a congenital disease of the child, an alcoholic husband, a catastrophic lack of funds for food and child care items).

Thus, we can see that even though almost a third of women are consciously preparing for motherhood, it is still difficult for them to adapt to the new conditions of life in the status of a mother.

In social terms, women consider the biggest problem to be the lack of thorough social support for motherhood (52.4% of respondents) and a convenient work schedule for modern women with children (56.1% of respondents). When asking women about this, we also offered to choose several options for answers

(as in several cases described above), so the total result for all answers may exceed 100%. The problem of combining the work schedule and child care leads to the fact that many women have to give up their careers in favor of a child, but internally not every woman is satisfied with such a choice. At the same time, 29.1% of respondents note that due to the illness of a small child, they often have to go on sick leave, which negatively affects the quality of the professional duties performance and the career as a whole. Even some time after the end of preschool age, the need to constantly monitor the child during the day remains relevant (23.8% of the interviewed women marked this as a significant problem). If for a woman her career growth is of great importance, then the optimal combination of her professional life with the work schedule of children's institutions, etc. seems to be a very difficult task. In case of rejection of a career (even temporarily), a woman may lose her professional skills, suffer psychologically due to her inactive position, etc. Therefore, the objective limitations of a woman's ability to return to work, related to the responsibilities of caring for a child, negatively affect her feeling of self-sufficiency, protection and, accordingly, the entire atmosphere of family life.

Our next step was a comparative analysis of women's ideas about motherhood, depending on individual factors (age, environment, etc.).

Analyzing the age factor, we divided female respondents into two groups, depending on the activity of the reproductive function. At the same time, we set the conditional limit of differentiation of these two groups at the age of 40 years. To determine this limit, we used special scientific literature of a medical nature [17, p. 110; 32] According to this parameter, all respondents were divided as follows: up to 40 years (age of greater reproductive activity) – 57.2% (first group); after 40 years (age of less reproductive activity) – 42.8% (second group). Next, we conducted a comparative analysis of ideas about motherhood in each of the selected groups. The following were the most significant results.

91.1% of the representatives of the second group are included in professional activities, while among the representatives of the first group there are only 21.5% of such, while the so-called "intermediate" options ("housewife", "working at home", etc.) make up 35.3% in total. Such results, on the one hand, can be considered objectively determined, since women after the age of 40 have children who are either adults or have reached the age of relative independence, which allows women to fully engage in professional activities. Women younger than 40 are forced to be more actively involved in child care, which prevents them from leading a full professional life. The peculiarity of these results is that among 78.5% of women of reproductive age, who are not fully included in social and professional activities, there is a part of women whose children have reached the age of 3 years and older, but still this does not allow them to be fully included in professional activities. These results confirm our assumptions that the presence of minor children and the need for constant and careful care of them make it difficult for a woman to achieve her professional (self) realization, even despite the involvement of children in kindergartens care, schools, etc. The criticality of the situation is that the age up to 40 is usually the age of the most active professional, intellectual, and social growth, which seems difficult for women who have small children at this age.

Regarding the number of children in representatives of two different age groups, 64.2% of women of the first group have one child and 73.3% of women of the second group have one child. We assume that such data are due to the fact that the birth and upbringing of children by women of the second group occurred at the beginning of the 2000s, when there was a difficult social situation, including with social support for motherhood (reduction in the number of kindergartens, lack of a vaccination system, the actual lack of social facilities at birth child, etc.). In addition, the respondents of the second group experienced a very difficult period in the 1990s, which was characterized by an extremely high level of uncertainty, therefore, most likely, they were afraid to give birth to more than

one child, because they had doubts about the stability of their own resources and the ability to provide a child with everything necessary. On the other hand, representatives of the first group experienced conscious adulthood in a more stable society, which, as we assume, had a positive effect on the willingness of almost 40% to have more than one child.

The distribution of women by age revealed another interesting trend regarding the (dis)coincidence of ideas about motherhood before and after the birth of a child. In particular, 18.4% of female respondents under the age of 40 answered that their ideas "before" and "after" coincided completely, 56.3% answered that they rather coincided, and 22.2% believe that they did not coincide at all, 3.1% hesitated to give an unambiguous answer to this question. As for women after 40 years of age, a completely different trend manifested itself in this group: 48.3% of respondents report complete coincidence of their ideas (which is more than twice as many as in the first group); the answer "rather they coincided" was fixed in 35.7% of respondents; did not coincide at all - in 14.1%, 1.9% hesitated to give an unambiguous answer (see Table 1).

Table 1: (Non)coincidence of ideas about motherhood before and after the birth of a child among representatives of different age groups (n1=57.2% n2=42.8%)

Age of women	The ideas completely coincided	The ideas to some extent coincide / did not coincide	The ideas did not coincide at all	Difficult to answer
Under 40 (n1)	18.4	56.3	22.2	3.1
After 40 (n2)	48.3	35.7	14.1	1.9

For women under 40, the difficulties associated with the lack of independence of the child and the need for increased care for it are still significant, however, women after 40, most likely, have already pushed the relevant period of their life out of their memory. The displacement mechanism, firstly, allows preserving positive memories and eliminating negative ones (i.e., psychological defense mechanisms are included), secondly, it allows maintaining a normal or even high self-esteem of a woman as a mother, despite the difficulties experienced.

Regarding the level of readiness for the appearance of the first child, again, women under the age of 40 indicated that they were completely ready - 27.2%, rather ready - 32.7%, rather not ready - 21.1% and not ready at all - 19%. That is, about 40% of representatives of this group indicate one or another degree of unpreparedness for the appearance of the first child. At the same time, women after the age of over 40 answered as follows: were completely ready - 45.3%, rather ready - 32.6%, rather not ready - 12.4%, not ready at all - 9.7%. This confirms the assumption that with the passage of time, difficulties and negative moments associated with the birth of a child and the first years of caring for it are displaced.

The most important meaning of motherhood for 85.5% of women under 40 is caring for and expressing love for a child. Women after the age of 40 were less unanimous in defining the meaning of motherhood, so the answers to the corresponding question were distributed as follows: 37.3% consider it important to express care and love; 29.6% see the meaning of motherhood in the realization of a "full-fledged female life" (attitude - "every woman should have children"); 21.9% - in realizing their potential (to raise a child, to pass on their knowledge, life experience); 11% see the meaning in something else (for example, in the continuation of the family, in ensuring a "reliable old age", etc.). Probably, older women already see a person in a child, and not just a baby who needs to be taken care of, a sense of fulfilled reproductive role appears, a certain transformation of ideas about motherhood takes place, which

finds expression in (often unconscious) longing for the role of a mother.

As for the ideas about the greatest difficulties of motherhood, then, once again, certain differences between the groups representing respondents of different ages manifested. For women under 40, the greatest difficulties are the following (respondents had the opportunity to choose no more than three answer options): the need to often leave professional activities due to child illnesses (57.4% of respondents); lack of a convenient work or study schedule (50.3% of respondents); the need to constantly monitor the child during the day (34.3% of respondents). As for women over 40, women mentioned the listed difficulties three times less.

77.7% of women who rated their level of readiness for motherhood as high are married, so they felt more protected and confident. These women's ideas about motherhood were formed, first of all, on the basis of childhood experiences and their own dreams (57.7% of respondents in the group). The greatest meaning of motherhood for these women is expressed in the care and expression of love for the child. The most difficult period for this category of women turned out to be the first six months (44.4% of respondents in the group). At the same time, 84.2% of respondents felt love and happiness from the birth of a child. Only 5.5% are categorically negative about having children in the future.

85.7% of women who rated their level of readiness for motherhood as average or low are in unstable relationships, divorced or raising a child alone. These women's ideas about motherhood were formed, first of all, based on the experience of friends and acquaintances, as well as their own dreams (68.4% of respondents in the group). Women of this group see the greatest meaning of motherhood in the opportunity to establish trusting relationships with their children and help them overcome difficulties. The most difficult period for the women of this group was the first year of the child's life (42.8% of respondents in the group). Also, 71.4% of women felt love and happiness from the birth of a child, 42.8% of women liked watching the "new little life". Among the women of this group, 28.5% categorically do not plan to have a child later in life.

Thus, we see another regularity, which is as follows: despite the similarity of the conditions for the formation of ideas in both groups, in the group with a high readiness for motherhood, the stability of the family system and family relationships made it possible to pass the period of transformation of ideas more effectively.

45.2% of women who noted a complete coincidence of ideas about motherhood before and after the birth of a child, claim that they would give birth to more children if there were favorable conditions in society. Also, 90.1% of women from this group consider the social role of the mother to be one of the most important in their lives. For 50.3% of these women, their husband's opinion is as important as their own. At the same time, in the group of women who noted the discrepancy between the ideas about motherhood before and after the birth of a child, the opinion of their husbands has weight only for 20.2% of respondents, and their own opinion - for 80.4%. This indicates a certain lack of trust in loved ones, an orientation solely on own strength. And yet 60.3% of such women felt love for the child from the very birth, and approximately the same number watched new life with interest and gradually got used to their new role, although they were not completely ready for it from the very beginning. As we can see, readiness for motherhood is closely related to the level and quality of family relationships.

All this proves our thesis that effective preparation for motherhood, the formation of adequate ideas against the background of emotional readiness for the birth of a child, lays the foundations for the positive dynamics of the family system at the birth of a child.

4 Conclusion

Based on the results of theoretical analysis and empirical research, the results of which are presented in detail in this article, the following general conclusions can be drawn:

- Three main stages of motherhood can be distinguished: 1) formation of ideas about motherhood; 2) making a decision about motherhood; 3) realization of motherhood;
- Each of the stages of motherhood has its own peculiarities and difficulties, which, nevertheless, are closely related to each other. We present the most negative scenario of the development of these problems: 1) idealization of ideas about motherhood; 2) making a decision about motherhood without taking into account the objective situation and objective facts; 3) stressful perception of difficulties accompanying the realization of motherhood, significant deterioration of a woman's psycho-emotional state, postpartum depression, inadequately low self-esteem, problems in the family, in relations with her husband and loved ones;
- In this way, the problems of realizing motherhood as a whole begin with the excessive idealization of the image and social roles of the mother, which are reflected in the ideas of women. The main factors of such idealization and, accordingly, the formation of women's ideas about motherhood are the following: social stereotypes and attitudes regarding the image of the mother, regarding the social roles of the mother, etc., as well as one's own childhood experience (care with younger brothers and/or sisters, parental behavior models) and dreams (about marriage and children).
- The following are the most influential factors causing the inconsistency of a woman's ideas about motherhood before and after the birth of a child: long physiological recovery after childbirth; high level of child care workload; the absence of a clear system of social support for motherhood, which leads to full or partial, more or less prolonged social isolation of a woman;
- The most influential factors in the transformation of women's ideas about motherhood before and after the birth of a child, which, despite all the difficulties, ensure a certain continuity between the imaginary (before) and the real (after), are the support of the young mother by her husband, as well as close relatives.
- In order to avoid significant problems at the stage of implementing motherhood, it is necessary that ideas about motherhood are formed on the basis of an objective situation, as well as objective facts (and not dreams, myths, images and stereotypes), that is, they are not idealized, but realistic. In our opinion, the most realistic are the beliefs of women who undergo special training (independently or at special courses and/or trainings) before the birth of a child. Such training includes: work with the risks of motherhood; awareness of possible difficulties of motherhood and working out options for overcoming them; formation of skills for building own unique model of motherhood, which would take into account the interests of the mother as an individual (for example, professional) and foresee ways of their implementation.
- It is necessary to implement a thorough system of social support for motherhood, develop and implement a program of psychological measures aimed at preparing a woman for motherhood, taking into account the specifics of restructuring her life after the birth of a child. This will allow: 1) weakening the influence of social stereotypes and attitudes, preventing the formation of overly idealized ideas about motherhood; 2) strengthening the justification of the decision about motherhood, which is based on knowledge/awareness of possible difficulties and readiness to overcome them; 3) strengthening a woman's ability to cope with difficulties at the stage of realizing motherhood, be a happy mother, and enjoy life in general.

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LEGAL NATURE OF JURISDICTIONAL IMMUNITY OF STATES IN INTERNATIONAL PRIVATE LAW

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Abstract: The article examines the theoretical and legal foundations of jurisdictional immunity of states in private international law and its methodological foundations. The author analyzes the principles of formation of jurisdictional immunity of states, defines the concept and its characteristics, names the main types of immunity of states. The main theories of jurisdictional immunity of states are considered: absolute immunity and functional (limited) immunity. The author pays special attention to the legal regulation of jurisdictional immunity of states at the international and national levels. The main provisions of the concept of jurisdictional immunity of states in private international law relations are revealed.

Keywords: private international law; state immunity; jurisdictional immunity; state sovereignty.

1 Introduction

The study of the legal nature of the jurisdictional immunity of states in private international law relations is relevant in view of the current state of the political development of international relations and private international law, as evidenced by numerous situations, including court cases concerning private-law relations at the international level. Issues related to the assessment of trends in the development of state immunity in private international law due to legal situations that constantly arise both for Ukraine and for other states of the international community are relevant.¹

The problem of immunity of a foreign state and its property is relevant for many countries. In particular, in Austria, in 2002-2004, American courts considered the issue of seizing several paintings by the famous Austrian artist G. Klimt from the Austrian National Gallery and transferring them to a private person (US citizen) who claimed her rights to them. A similar situation arose for Germany, when in 2001 the Greek court ordered the seizure of German real estate in Athens, primarily the buildings of the Goethe Institute and the German Archaeological Museum. In 2002, a number of American citizens filed a civil lawsuit in the US court against a French railway that transported more than 70,000 Jews to death camps during the Second World War. Also in 2002, a lawsuit was filed against Japan by several South Korean citizens who were used as sex slaves during the Second World War [15].

The relevance of the study is also confirmed by the fact that nowadays in Ukraine there is no law on the immunity of foreign states in Ukraine, including in private legal relations [24]. The fact that the law has not yet been adopted emphasizes the urgent nature of the issue of foreign state immunity, which is representing difficult problem for the legislator. The issue of scientific study of the problem due to the mutual influence of court decisions of different states and the formation of the doctrine of private international law is also relevant.

2 Materials and Methods

The methodological basis of the study is made up of general scientific methods, including the dialectical, system-structural approach, methods of induction and deduction, as well as special ones – primarily, formal-legal, comparative-legal, and historical-legal methods. The main research method is the method of comparative legal analysis, which is used to identify the main definitions of the concept of "state immunity", conceptual approaches to this institution in private international law.

¹ For example, the suit of the Addox company to the court of the Southern District of New York against Ukraine with the demand to prohibit the auction for the sale of shares of the Kryvorizhstal combine in October 2005.

3 Results and Discussion

Formation of jurisdictional immunity of the state

The establishment of state immunity, i.e., non-subordination to the legal order of a foreign state, took place in ancient times, and since then has been based on the principle "equal has no power over equal" (lat. *par in parem non habet imperium*).

At the early stage of the formation of this institution, the courts substantiated the right of a foreign state to immunity by international courtesy - *comitas gentium* [19]. It is mentioned already in the first judicial decision of the Dutch court in 1688, which recognized the immunity of a foreign country: three Spanish warships were detained in a foreign port, in connection with the claims of private individuals to the Spanish king. The arrest was lifted and declared illegal, as it violated the rules of courtesy towards a foreign sovereign [1]. Later, these norms grew into customary law, and began to be called "ambassador's law". The Dutch professor Peter Malanchuk emphasizes the customary nature of the norms regarding state immunity [14]. State immunity was "established and acted, first of all, as a customary legal norm" [25]. Filing a claim against a foreign state, securing a claim and levying a foreclosure on the property of a foreign state could not be allowed. Originating in the Middle Ages, this principle dominated in the international legal practice and theory for a long time. In particular, at the beginning of the 19th century, American courts considered the right of states to immunity as an international legal custom, which is based on the principles of state independence and sovereignty. The decision of the US Supreme Court in 1812 is indicative – it was directly based on the presence of international legal custom. This complete equality and absolute independence of sovereigns and these common interests, prompting them to mutual relations, as well as the exchange of good services with each other, gave rise to a variety of legal cases, which proceed from the fact that each sovereign refuses to fulfill a part of that complete, exclusively territorial jurisdiction, which is considered as a property of each state [27].

In the New and Modern times, the theory (concept) of absolute immunity was the dominant concept in the formation of state immunity for a long time (remaining dominant in the Soviet period in the domestic Soviet doctrine of international law). Only at the end of the 19th century - the beginning of the 20th century, at the theoretical level, recognition of the position that state immunity interferes with ensuring the normal participation of the state in commercial relations occurred, and the first attempts to formulate the main positions of the theory (concept) of functional (limited) immunity appeared.

At the end of the 19th - beginning of the 20th century, among the countries of continental Europe, and later others, including the USA, the practice spread according to which a foreign state as a subject of private law and a carrier of private rights can, along with other private individuals, be subject to the jurisdiction of a local court. The US State Shipping Act of 1925 recognized the subjection of US state merchant vessels to foreign jurisdiction. The Brussels Convention on the Immunity of State Ships of 1926 adopted later, equated state merchant ships to private ships "with respect to claims concerning the dispatch of ships and the carriage of cargo". Even those states (the practice of Spain, France, etc.) that did not grant judicial immunity to foreign private individuals still provided them with immunity from execution based on the principle of independence of states [5].

During the 20th century, the theory of limited immunity of the state was in constant development, the number of cases when the state has the right to invoke immunity was reduced, and the mechanism of separating the commercial activity of the state from actions related to the implementation of its sovereign functions was improved. In the middle of the 20th century, the

theory of state immunity took on a debatable nature in the theory of private international law. Namely during this period, the main provisions of the theory of absolute (I. Brownlee, P. Malančuk, L. Oppenheim, M. Ushakov) and functional (limited) immunity of states (B. Festvald, V. Bishop, A. Kuhn, S. Sucharitkul, M. Boguslavskiy, H. Fox) were developed.

The absolute principle was dominant in the international legal theory and practice for a long time. Currently, the circle of states that recognize the dominance of this principle has narrowed. There are reasons for this: firstly, it hinders the development of commercial relations, as the counterparties of the state essentially lose their rights to judicial protection of their property cases. Secondly, absolute immunity is very often not implemented in practice. A state on the territory of a foreign state can count on only the amount of immunity for which the host country is willing to waive its jurisdiction. Therefore, the states that are exempt from absolute immunity additionally protect their rights either by the condition of reciprocity or by the possibility of applying retort.

It should be noted that “the jurisdiction of the state does not mean the absoluteness of power, since modern international law in certain cases establishes restrictions on the state’s exercise of its jurisdiction” (M.M. Hnatovskiy, Z.V. Tropin) [19]. Such restrictions include restrictions on the territory of the state, for example, on establishing the status of international channels, as well as various immunities of foreign states and their property.

At the end of the 20th century, the theory of limited sovereignty was consolidated at the normative level and was characterized by the adoption of national laws on state immunity, the first of which was the US law on state immunity of 1978 and the European Convention on State Immunity of 1972. At the universal level, the work program of the UN International Law Commission includes issues of state immunity, which ended at the beginning of the 21st century by the adoption at the 59th session of the UN General Assembly of the Convention on jurisdictional immunities of states and their property.

At the beginning of the 21st century, especially in the conditions of globalization [13, 22], the sphere of state participation in both public-law and private-law relations, complicated by a foreign element, is growing significantly. A state acting as a sovereign always has immunity, however, if the state acts as a private person (for example, carries out foreign trade operations and/or engages in other commercial activities), then its immunity is limited.

Jurisdictional immunity of states: concepts and types

Thus, state immunity is an integral property of the state as a subject of international law. In the modern legal world, the rule “equal does not have jurisdiction over equal” (lat. “*par in parem non habet jurisdictionem*”) applies, i.e., the state cannot file a lawsuit against another state, demand from a foreign state recovery of property and carry out other procedural actions, except for cases agreed to by the state - potential defendant.

There are different views on the legal characteristic of immunity in the doctrine of international law. Some scientists believe that the jurisdictional immunity of the state is a principle of international law (V.N. Denisov), while others focus on the fact that immunity is based on the sovereignty of states, their sovereign equality (H.S. Fedyniak). Some scientists prove that immunity does not have an imperative character (Y. Brownlee), while others, on the contrary, point to its imperative character (M.M. Boguslavskiy). It is especially important to clarify this characteristic in cases where a foreign state is the subject of private legal relations.

Despite the difference in doctrine regarding the imperativeness or dispositive nature of immunity norms, the legislation and practice of all states is clearly and unconditionally based on the principle of immunity. International conventions, legislation, practice, and doctrine of international law reveal such a concept as the essence of immunity in different ways, but the common

understanding of state immunity is the withdrawal of a state and its organs from the jurisdiction of another state.

The term “immunity” etymologically comes from the Latin *immunitas* and means freedom from something, inviolability, independence. It is used in various fields, including biology and medicine. In legal science, there are several approaches to the interpretation of this term. Thus, in criminal proceedings, immunity provides for the release of certain persons from the performance of certain procedural duties. In constitutional law, along with the term “immunity”, the term “indemnity” is also used, which is associated with the activities of deputies. Indemnity means freedom of speech and voting in the parliament, as a result of which it is not allowed to bring the deputy to responsibility for his parliamentary activity (speech and other actions during the exercise of the mandate: in the chamber, committee (commission), in other cases when the statement is of a public nature, as well as for the content of introduced draft laws and other decisions, for voting, questions and requests, amendments, etc.) [6].

In the international law, immunity is understood as the non-jurisdiction of a state to the courts of another state. Let us turn to the “Legal Encyclopedia”, which states that “the immunity of the state has developed as a principle that has an absolute character. Immunity should be enjoyed by foreign states, their bodies, as well as property belonging to these states. A state cannot be brought to the court of a foreign state as a defendant, except in cases of its direct consent to this. The property of a foreign state cannot be subjected to measures of a coercive nature (seizure, etc.), it cannot be the subject of securing a claim and levy on property in order to enforce a court or arbitration decision” [5].

The immunity of a foreign state consists in the release of one state from the jurisdiction of another state, which allows it to be called jurisdictional immunity. Defining jurisdiction in the most general way, it can be said that it is the authority of the state based on state sovereignty, or as the American scientist B. Oxman notes, “its power to decide whether to act, and if to act, how” [17]. British professor M. Shaw considers jurisdiction as the power belonging to the state to influence people, property and circumstances through legislative, executive, and judicial acts. Jurisdiction is an important component of state sovereignty. Shaw notes that the jurisdiction of the state is related to such principles of international law as “state sovereignty, equality of states, and non-interference in internal affairs” [21]. Another well-known British scientist, I. Brownley, understands jurisdiction as a manifestation of “the general legal competence of states, which is often called sovereignty. Jurisdiction is one of the aspects of sovereignty and consists of judicial, legislative, and administrative competence” [2].

Jurisdiction and immunity from jurisdiction are correlated as “yes” and “no” answers. In fact, if the jurisdiction answers the question of what the state power of a certain country can do, then the immunity from jurisdiction determines the subjects (state, international organization, diplomatic and consular missions, military bases on the territory of a foreign state, etc.) on which the power of this state in full volume cannot be extended.

The issue of jurisdiction is an ascending one. If there is no reason for its production, then the problem of immunity does not arise. In the Commentary of the UN International Law Commission to Art. 6 of the draft articles “On jurisdictional immunity of states and their property”, it is stated: “Since ... immunity is granted from the jurisdiction of another state, it is quite clear that there is a presumption of jurisdiction of this other state in relation to the issue under consideration; otherwise, there would be no need at all to invoke the rule of state immunity in the absence of jurisdiction. Thus, there is a mandatory and inextricable connection between state immunity and the presence of jurisdiction of another state in relation to the issue under consideration” [21].

Jurisdictional immunity of the state is an emerging concept in the study of state immunity in both public and private law

spheres. From the standpoint of the foundations of international law, the situation when one state limits the immunity of a foreign state without the consent of the latter is unacceptable. The domestic laws of states regulating the issue of jurisdictional immunity of a foreign state should not contain specific restrictions aimed at limiting the immunity of a foreign state to the extent of obligations greater than the foreign state itself has assumed at the international legal level or at the level of its own domestic legal system. Any type of immunity (for example, judicial immunity) can be considered as an independent element in the meaning of the general concept – “jurisdictional immunity”. The concepts of “state immunity” and “jurisdictional immunity” are close in meaning, but they cannot be equated, since there are quite a lot of elements that fill the meaning of the concept of “state immunity”, such as the concepts of “fiscal immunity”, “tax immunity”, etc.

Based on the fact that the state, as the bearer of public power, cannot be subject to the legislation, jurisdiction, and management of any foreign state, it is subject exclusively to international law. The jurisdictional immunity of the state is based namely on this postulate, which is also confirmed by the judicial practice of many states; scientists pay attention to such a position in the US Supreme Court in considering the case *Oetjen v. Central Leather Comp.* (1918): “Every sovereign State is bound to respect the independence of every other sovereign State, and the courts of one State shall not pass judgment on the acts of the Government of another State, done within its own territory. Compensation for damages caused by these actions must be achieved by the means used by sovereign states in their mutual relations”.

Another postulate on which the jurisdictional immunity of the state is based is that immunity is grounded on the sovereignty of states, their sovereign equality. This means that none of the states can exercise its power over another state, its bodies, or property. This status is characterized as *par in parem non habet imperium* – “an equal has no power over equal”.

The majority of scientists (L. Lunts, G. Fedyniak, A. Cassese) associate the state's ability to possess jurisdictional immunity namely with the presence of sovereignty, that is, non-jurisdiction of the courts of other countries and protection from enforcement measures of a coercive nature, as well as from the enforced execution of a decision rendered against the state. The Italian professor A. Cassese in his well-known work “International Law” calls sovereignty an all-encompassing category and characterizes it as the right to extend one's power to all persons who are on the territory of the state. This right, according to the scientist, is the “quintessence of sovereignty” [3]. Another, Thai, scientist, member of the UN International Law Commission S. Sucharitkul wrote: “... the basis of immunity in the international law can be found in the principles of sovereignty, independence, equality, and dignity of the state” [23].

The principle of sovereign equality of states, which is the fundamental basis of the principle of state immunity, is enshrined in the UN Charter and detailed in the Declaration on the Principles of International Law Relating to Friendly Relations and Cooperation between States in accordance with the UN Charter of October 24, 1970. According to the Declaration on the Principles of International Law 1970, “all states enjoy sovereign equality” [4]. They have the same rights and obligations and are equal members of the international community, regardless of differences of an economic, social, political, or other nature. The concept of “sovereign equality” contains a number of constituent elements, among which the following are decisive: a) states are legally equal; b) each state enjoys the rights inherent in full sovereignty; c) each state is obliged to respect the legal personality of other states; d) territorial integrity and political independence of the state are inviolable, and others.

In the doctrine of international law, it is generally recognized that two main concepts of state immunity are distinguished: absolute and functional (limited). Absolute immunity originates from the state, expresses its will, and is organically connected

with power. The authorities create a special, exclusively legal regime for individual subjects to exercise their powers and ensure the development of international relations. Absolute immunity is inherent in public-law relations between states, while in private-law relations the state acts as an equal participant in private international law and it a priori has functional (limited) immunity. In cases where the state acts as a private person within the framework of private international law, foreign economic law, it is about its commercial activity, and in such a case it does not have absolute immunity. It has functional (limited) sovereignty in such cases.

The European Convention on State Immunity of May 16, 1972 (Basel Convention) is based on the concept of functional (limited) immunity [7]. According to the Basel Convention, the functional (limited) immunity of the state can be: a) positive and b) conditional. Positive functional (limited) immunity is the immunity of the Contracting States under this Convention, when they non-contractually recognize the jurisdiction of the courts of another Contracting State (Article 1, Clause 1). Conditional functional (limited) immunity is the immunity of contracting states, which is based on private treaties or court decisions outside the Basel Convention.

In the theory and practice of states, several types of immunity are distinguished: 1) judicial; 2) from preliminary security of the claim; 3) from enforced execution of a court decision; 4) property [8]). Judicial immunity is characterized as the most important immunity of the state, which establishes the non-jurisdiction of the court of another state, although the state can be a participant in the legal process, that is, it can be sued, it can be involved as a third party, it is possible to seize property belonging to a foreign state, as well as a seizure of its property is possible in order to enforce the court decision. Depending on the subjects of law, diplomatic immunity, witness immunity, parliamentary (deputy) immunity, judicial immunity, presidential immunity, and others are distinguished.

Therefore, jurisdictional immunity means the immunity of the state and its property from means of securing a claim and enforcement of a court decision in the courts of another state. With the passage of time and the development of international trade, the involvement of the state in private law relations, the concept of absolute immunity loses its dominant position as it does not meet the needs of subjects of international law. Subjects of private law relations, including the state, must guarantee the fulfillment of obligations. The concept of functional (restrictive) immunity assumes that the state and its property have immunity in cases where the property is used to ensure sovereign functions, while in commercial legal relations, the state and its property do not have immunity.

Legal regulation of jurisdictional immunity of states in private international law

The issue of jurisdictional immunity of states in private international law is regulated by international treaties and national legislation of states.

For the first time, the concept of state immunity was enshrined in the Brussels Convention for the Unification of Certain Rules Concerning the Immunity of State Vessels dated April 10, 1926, with subsequent additions in 1934. In this attempt to codify the rules on immunity, absolute state immunity was enshrined as the right of a state to exercise its sovereignty in full volume, including all state property and institutions. More than 20 European and South American countries took part in the Convention, including Germany, Italy, Poland, and Sweden.

The Geneva Convention on the Territorial Sea and the Contiguous Zone No. 1135 of April 29, 1958 [10] established that a coastal State may exercise the same jurisdiction over foreign state vessels operating for commercial purposes as over merchant vessels making peaceful passage through its territorial sea. Therefore, a state that owns a merchant vessel or a state that chartered a vessel for commercial purposes is placed in a position equivalent to that of a private merchant vessel.

The efforts of the international community to codify the norms regarding the immunity of states are embodied to some extent in separate general (universal) conventions. In particular, in the Vienna Convention on Diplomatic Communications of April 18, 1961, the Convention on Special Missions of 1969, the Vienna Convention on the Representation of States and their Relations with International Organizations of a Universal Character of March 14, 1975, the Vienna Convention on Consular Communications of April 24 1963 issues related to the representation of states in the international communication have been settled. These international legal acts regulate the issue of the diplomatic agent's use of immunity from civil jurisdiction, except for bringing claims *in rem* against private immovable property located on the territory of the receiving state, unless the agent has immunity on behalf of the accrediting state for the purpose of representation. In the Vienna Convention on Diplomatic Relations 1961 the procedure for bringing claims in the field of inheritance is defined, if the agent must be the executor of the will, take care of the inherited property, the heir or the "responsible recipient" as a private person, and not on behalf of the accrediting state.

An important place in the legal regulation of these relations is occupied by the European Convention on State Immunity (ETS N 74) of May 16, 1972 (Basel, Switzerland), which entered into force on June 11, 1976 [7]. As of January 1, 2006, its participants were Austria, Belgium, Great Britain, Germany, Cyprus, Luxembourg, the Netherlands, and Switzerland. The Convention delimits the spheres of state immunity - public law and private law, and defines the cases when state immunity is preserved and when it is not applied.

The European (Basel) Convention of 1972 encouraged states to adopt from the mid-70s of the 20th century special laws of the states, containing rules on the immunity of the state and its property. These are the Foreign Immunity Act (USA, 1976), the State Immunity Act (UK, 1978), the Act To Provide For State Immunity in Canadian Courts (Canada, 1982), the State Immunity Ordinance (Pakistan, 1981), State Immunity Act (Singapore, 1979), Foreign State Immunities Act (South Africa, 1981), Foreign State Immunity Act (Australia, 1984).

The next stage of codification and progressive development of the norms of jurisdictional immunity of states was the draft articles on jurisdictional immunities of states and their property, adopted in the first reading by the International Law Commission in 1986.

In 1979, at the behest of the General Assembly, the UN International Law Commission began work (lasted more than 30 years) on a universal convention on jurisdictional immunities of states and their property, which is based on the concept of functional (limited) state sovereignty. The draft articles of this convention were adopted in the first reading by the International Law Commission in 1986 and only at the beginning of the 21st century work was completed, resulting in the universal UN Convention on Jurisdictional Immunities of States and their Property, approved by UN General Assembly Resolution No. 59/38 of December 2, 2004 (New York) [27], but not entered into force. The Convention contains the Appendix "Explanation regarding individual provisions of the Convention". It was signed by 28 states and ratified by 8 - Austria, Iran, Norway, Portugal, Romania, Switzerland, Sweden, Japan - from which the application for accession has declared acceptance of the Convention. However, due to the insufficient number of ratifications (ratification by 30 states is required), the Convention has not yet entered into force.

The UN Convention on Jurisdictional Immunities of States and Their Property dated December 2, 2004 confirms the principle of jurisdictional immunity of states and their property; the contemporary practice of economic cooperation between states was taken into account; the meaning of such terms as "state" and "commercial agreement" is defined; the validity of the traditional privileges and immunities that the state has in accordance with international law, namely in relation to its diplomatic missions, consular institutions, special missions,

representative offices at international organizations and delegations in the bodies of international organizations and at international conferences, as well as persons belonging to them is stated; privileges and immunities are granted to heads of state and others. In addition, the 2004 Convention defines the means of ensuring the immunity of states, which oblige courts on their own initiative to issue a decision on compliance with the immunity of a foreign state in accordance with the provisions of the draft convention; criteria characterizing the content of the formula "clearly expressed consent of the state to exercise jurisdiction in the court of a foreign state" were proposed; the consequences of the state's participation in court proceedings with its consent and under other circumstances are considered; exceptions to the general rule on the immunity of states in the sphere of its trade or commercial activity, labor contracts, etc. are established.

Legal regulation of jurisdictional immunity is not perfect. The issue of jurisdictional immunity of the state in private international law, including in the case of litigation of private law disputes involving foreign persons, has not yet been settled at the level of private international law. A small number of states have laws regarding the immunity of states and their property in their national legislation.

This problem is also relevant for Ukraine. Currently, the Verkhovna Rada of Ukraine is considering Draft Law No. 7520-2 of July 19, 2022 "On Limiting the Immunity of Foreign States and Their Officials from Filing Lawsuits and Recovering Damage Caused on the Territory of Ukraine by Death or Injury to Health, as well as damage caused to property as a result of armed aggression, temporary occupation of the territory of Ukraine, other actions or inaction". The draft of this law proposes to overcome the restrictions established by Art. 79 of the Law of Ukraine "On Private International Law" and, accordingly, deprive any aggressor state, its state-owned company, as well as its officials of the right to invoke judicial immunity when suing them. According to Art. 79 "Judicial immunity", it is established: "Bringing a lawsuit against a foreign state, involving a foreign state in participating in the case as a defendant or a third party, imposing a seizure on property belonging to a foreign state and located on the territory of Ukraine, using other means in relation to such property for the securing of a claim and enforcement of such property may be allowed only with the consent of the competent authorities of the relevant state, unless otherwise provided by an international treaty of Ukraine or the law of Ukraine" [12].

The concept of jurisdictional immunity of states in private international relations

Modern international practice is based on the assumption of the possibility of distinguishing between two types of state activity - public and private. However, due to the lack of general norms of international law, which would contain the concept of limited jurisdictional immunity of states, this practice is varied and sometimes contradictory. There is an opinion that the presence of disagreements in it leads to the destruction of norms related to the immunity of states. But it is difficult to agree with this assessment, since the law of state immunity automatically produces its own means of regulating the rights and obligations of states, adapting to certain circumstances. Thus, a number of continental European and South American countries are parties to the aforementioned Brussels Convention, according to which the state that owns a merchant vessel or the state that charters a vessel for commercial purposes is placed in a position equivalent to that of a private merchant vessel. Similarly, under the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone, a coastal State may exercise the same jurisdiction over foreign state vessels operating for commercial purposes as over merchant vessels in peaceful passage through its territorial sea.

State immunity has long been recognized as a consequence and manifestation of the sovereign equality of states as subjects of public international law [16], however, in private-law relations with foreign legal entities and individuals, the state acts as a subject of private international law. The state as a subject of

private international law falls under the jurisdiction of those bodies that exercise it in relation to private individuals. In private relations, the state is legally equal to other subjects (natural persons, legal entities), whose actions are subject to private law. "It would be impossible to achieve the actual equality of the state with other subjects of private law, if one agrees with the presence of the state's sovereignty in the sense of private international law" [9].

The trend of moving away from the absolute immunity of the state to a more pragmatic restrictive practice arose at the beginning of the 20th century, among the countries of continental Europe, and later others, including the USA. A practice appeared according to which a foreign state, as a subject of private law and a carrier of private rights, became subject to the jurisdiction of a local court, along with other private persons. Only those actions carried out by their state as a bearer of sovereign power (*jure imperium*) were removed from the local judiciary, and those related to its activities as a non-sovereign bearer of power (*jus gestionis*) remained. Jurisdiction regarding the last actions of the state was carried out according to the law of the place of the court deciding the case (*lex fori*). Only the former socialist countries consistently continued to adhere to the doctrine of absolute immunity, which was conditioned by the existence of state ownership as the basis of their economy and state monopoly on foreign trade.

The question of distinguishing the action of the state as *jure imperium* and the actions of *jus gestionis* is complex, especially in cases where foreign states choose forms of private commercial activity to achieve state goals. For example, the purchase of boots for the army could be considered both a commercial action and a governmental one, depending on which criterion to apply (objective, indicating the nature of the action, or subjective, related to the purpose of the action).

According to the doctrine of private international law, the state as a subject of private law does not enjoy such protection as a subject of public international law regarding the jurisdictional immunities of the state. Therefore, the principle of state immunity in private international law is not imperative. Judicial practice and legal acts of a number of states (USA, Canada, Australia, Great Britain, France) confirm the possibility of limiting state immunity. Professor M.O. Ushakov noted that "the possibility of limiting the immunity of a foreign state in private legal relations comes from the fact that the international community did not give it an imperative character. One or another deviation from it in the mutual relations of two or more states does not affect the vital interests of other states and the international community as a whole" [26].

It should be noted that the absolute immunity of the state does not contribute to the protection of private legal relations between their subjects, since the state's right to judicial protection of the property interests of the subjects of such relations is limited. Therefore, states must, when concluding treaties, introduce conditions of reciprocity or the possibility of applying retort, that is, introduce restrictive measures applied by one state to another state (or to its citizens) in response to its unjust actions in order to achieve the cessation of these actions. Therefore, the current policy vector of most states in matters of immunity is shifting to the use of functional (limited) state immunity. In particular, the distinction between the immunity of states in the public and private spheres is found in German legislation, where the decision of the Federal Constitutional Court of Germany in 1963 states that the granting of immunity depends on "whether a foreign state acts in the exercise of its sovereign power or as a private person, i.e., within the limits of private law". The legislation of Ukraine provides for liability for breach of obligations arising from agreements (contracts). According to the Law of Ukraine "On Foreign Economic Activity" dated April 16, 1991 (Article 32), if Ukraine participates in foreign economic activity as a subject of such activity, then it bears responsibility on a general and equal basis on an equal footing with other foreign subjects of foreign economic activity [11].

4 Conclusion

The study of the jurisdictional immunity of states in private international law is relevant in view of the practice of relations between states in the modern world and the consideration of court cases on controversial issues. The right of a state to immunity from the jurisdiction of another state is a generally recognized principle of international law, consisting in the non-subordination of a state to the power of another state and its bodies and is expressed by the formula *par in parem non habet imperium*.

Jurisdictional immunity of states should be considered as a principle in private international legal relations, which should be followed by all subjects of international legal relations. The principle of state immunity is a dispositive principle and should be limited in private legal relations, which is justified in the concept of limited immunity. According to this concept, a state has the right to invoke immunity only when it performs actions aimed at exercising sovereign powers, and does not enjoy absolute immunity when it performs private law agreements. These provisions should be enshrined in the international legal acts, national legislation and confirmed by judicial practice.

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CULTURE AND ART: MODELS OF SOCIAL COMMUNICATIONS

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Abstract: The article notes that the development of technology, economics, political, social, and cultural changes at the end of the 20th century led to a radical transformation of the world in general and, in particular, the world of art. The positions of the artist and the viewer, the principles of construction and interpretation of a work of art have changed dramatically. The relationship between the concepts of "dialogue" and "communication" in culture and art, including within the framework of the phenomenon of network art, is considered. It is revealed that the process of communication between the viewer and the work of art is the basis of ideal formation in culture. The research shows that communication is considered as an unconditional quality of modern culture, which determines its fundamental difference from the culture of previous historical eras.

Keywords: contemporary art; communication; culture of participation; social interaction; aesthetic ideas.

1 Introduction

Art has always been a means of communication, but today, in the era of interactive, procedural, and public artistic practices, this aspect is of particular interest. In general, the art of the 20th and 21st centuries is characterized by increased attention to the role of the audience. Throughout the century, due to the development of technology and the media, art has become increasingly accessible to the mass public.

Artistic communication is understood as the process of interaction or communication of the viewer with a work of art within the framework of an artistic space, which includes the transmission and receipt of artistic information through different channels, its integration in the mind of the viewer [11, 12]. The specificity of artistic information is "untranslatability into any other sign system, the impossibility of its "transcoding" even into another artistic language" [26]. Information is transmitted from the author to the viewer through the work, but communication with many examples of modern artistic practices implies more complex processes than the perception of the message: the viewer's participation in the creation of the work; physical interaction with an interactive object; use of many channels of perception. This kind of communication became possible within the framework of postmodern art. Through modernist practices of rejection of figurativeness, provocative appeal to the audience, exceptional attention to the essence of art, interest in silence and noise, interference in the "message" - art in the second half of the 20th century comes to focusing on the mass audience, strengthening the game, ironic beginning, actualization of procedural forms, shifting the emphasis from the image of reality to its use as a scene and material for a work.

The problem of communication is one of the central ones in cultural studies. Both culture and the very process of human cognition are communicative in nature. Communication processes are becoming an increasingly important area of politics, economics, activities of state structures, public organizations in solving the problems of consolidation and development of society.

The very place of communication in modern culture also gives particular relevance to the subject of this study. The emergence of new ways of communication is due to the needs of the development of production, consumption, a new way of life, new forms of human life, created on this basis. All this is the reason for the dynamics of the content of culture, the transition to a different system of value orientations. These transformations bring to life new needs for communication, including the

development and change in the ways and forms of social communication in artistic culture.

At the present stage of society development, communication in artistic culture is realized not only through its traditional forms, such as the living and written word, music, image, and dance. The dominant role in modern society is played by mass media (print, radio, television, cinema), electronic communications, and the Internet. The media reveal new possibilities for a person's social orientation through the dissemination of socio-cultural information that regulates his behavior, forms his self-awareness, unites him into an organized historical force, and mobilizes him to participate in social life.

The functioning of artistic culture in society is carried out through socially organized forms, which are a form of communication. Contemporary art has changed the idea of the artistic process, the role and position of the artist in it, the functions of art and its institutional status, the mechanisms of artistic reception and communication. The transformation of art carried out by modern artistic practice turned out to be so significant that researchers faced the problem of not only identifying art as a phenomenon, defining its boundaries, but also the need to consider the influence of art and its significance in the artistic environment. The nature of art depends on the socio-cultural environment in a certain historical space and time. Meanwhile, the artistic environment, as part of the sociocultural environment, takes over its qualities and properties, becoming, on the one hand, the source of the formation of actual artistic practices, and, on the other hand, experiencing their influence on itself.

The art of interaction changes the nature of artistic reception. "Relational work of art creates a social environment in which people come together to participate in collaborative activities, it assumes the audience as a community. But the audience here, according to the artists, is not already formed collective social community - "namely the work of art gives them the means to create this community" [25]. Any "problem" point on the map of a city, country, or world, which has a powerful social context, acts as an indicator of antagonisms and is independent of the traditional exposition space, can become an area for the realization of works of contemporary art aimed at social interaction. The "open" form of these works not only invites the audience to participate actively, as opposed to passive contemplation, but also assigns them the role of artistic material that allows the work to take place. Instead of the desire for social and political transformation characteristic of the early avant-garde, the artists of social interaction strive for the intensification of social contacts and the transformation of the artistic environment.

Collective communicative creativity is spreading in the late 20th - early 21st century. However, the very idea of a work of art as a space of communication is not new. Even in the writings of Immanuel Kant, one can find a mention that a work of art becomes a field for interaction between individuals: "Fine arts are a way of representation that is expedient in itself and, although without a goal, nevertheless contributes to the culture of the abilities of the soul for communication between people" [15]. And yet, in classical aesthetics, this communicative function of art was understood only as a concomitant, derivative, and only modern artistic practices turn it into the first and main goal. It should also be noted that the art of participation is rather not a stylistic direction, but a creative method, a tool that corresponds to current trends in art, which can be applied in a variety of ways.

The origins of the art of participation can be found in the experiments of the futurists and the performances of the Dadaists in the scandalous cabaret "Voltaire", productions by V. Meyerhold, performances and happenings of the 1950s-1960s, where interactivity and interaction became a way for the audience to get a new experience, far from what surrounds them

in everyday life. Examples of the aesthetics of interaction art were also seen in the work of the conceptualists Vito Acconci and Yoko Ono, and later the figures of the Situationist International circle, Lygia Clark, Stephen Willats, Adrian Piper, Joseph Beuys, the Material group, and many others turned to it. With the help of provocative practices, artists opposed outdated institutions of power, consumerism, the society of the spectacle according to Guy Debord [26]. The most widespread aesthetics of interaction was observed in the 1990s.

In classical fine arts, a drawing or a picture was presented to the viewer as a self-sufficient model of the world, existing in its own closed artistic space, which was emphasized by the internal completeness of the content, the completeness of the images, and the external boundaries of the frame. The artist hatched the ideas that worried him alone, looking for adequate forms of their embodiment, presenting the viewer with the final result of his searches, reflections, discoveries. Such relations with the viewer were due to the basic ideas of philosophy about the possibility of individual development of the surrounding reality, the recognition of the ability of a lonely genius to create an expanded system of worldview, that is, a harmonious complete picture of the world.

By the end of the 20th century, European culture questioned the very possibility of such a complete individual understanding of the world: "true philosophy and philosophical thought are not located in one head, but are located in the intellectual space between people" [1]. The thought that "ideas are in the air" becomes the basis for the formation of a new philosophical context of the era, leads to the idea that the world around us can only be mastered by the joint efforts of the community, without an individual monopoly on the truth. This state of affairs in worldview structures manifests adequately in the artistic sphere as well. Artists, like philosophers, give up their monopoly on both truth and the uniqueness of its emotional and sensory experience. In the center of their attention, there is the "zone of common feeling-space between people" - and in this outside individual common space of feeling, artists are actively mastering another role - the role of "communication specialist" [24].

The emergence of new information technologies has given new impetus to the development of modern artistic culture. New genres of performing arts emerged. And a special role in modern society is played by those among them in which modern communication tools are used to the greatest extent. In addition, the very existence and development of artistic culture is increasingly dependent on integration with the broad context of modern means of social communication. Advertising, public relations, scientific and humanitarian expertise, art education, media coverage, the formation and development of public opinion - all these aspects of the social existence of art are deeply and fundamentally dependent on the organization of the relevant types of social communication, its quality and effectiveness.

All this determines the importance of studying the models of social communications that are characteristic of modern culture and art.

2 Materials and Methods

The research methodology implies a systematic method based on the unity of theoretical-analytical and cultural-historical approaches. The theoretical and methodological basis of the study includes the principles of social philosophy, such as the principle of historicism, objectivity, concreteness, factuality. In order to identify the characterological peculiarities and parametric features of social communication, such instrumental methods as definition, recognition, assumption, hypothesis were used. When analyzing the characteristics of social dialogue in culture and art, the elements of social psychology and personality psychology, the method of comparative studies, and the elements of sociological methods of symbolic interactionism were used. To analyze the phenomenon of network art (net-art), approaches and provisions developed in cultural studies, philosophy, and art history were used.

3 Results and Discussion

In modern sociocultural conditions, interactions within the system of artistic communications and the external environment have become very complicated, since the functions of all participants in the artistic process have changed significantly. Based on the concept of axiological communicology, it can be argued that artistic culture is a productive and reproductive activity for the creation by its subjects of artistic values and anti-values, broadcast in social space and time with the help of artistic communications. The understanding and definition of artistic culture enhances the importance of the integrative function of sociocultural communications [17, 27]. It should be noted that "sociocultural communications" is a broader concept than "artistic communications", since it includes not only the processes of interaction in the artistic space of culture, but also all types of communication in the social world of culture as a whole. Scientific ideas about culture as a special syncretic material and spiritual unity of human activity that creates and preserves meanings, artifacts, values and ideals of human life give reason to assert that namely sociocultural communication is the basis of this cultural unity.

In the art of the 21st century, a new system of artistic communications is already beginning to take shape, based not only on the traditional perception of an artistic image through direct contact with the original work of art, but also on the perception of verbal artistic information through a theoretical or critical text, or through contact between the viewer and the author, moreover not interpersonal, but medial - mediated by the system of mass communications.

Many publications have been devoted to the study of the artistic culture of the 20th century. Of particular interest in this regard is the axiogenic aspect of socio-cultural communications in contemporary artistic culture. In the 20th century, a completely new type of artistic culture arose, which is associated with many circumstances in the social and aesthetic spheres. Artistic culture is interpreted in modern culturology as "a historically determined system of concretely sensory figurative knowledge and expression in images of the experience of sensory-emotional and intellectual life of people, fixing it in artistic values accumulated in the form of works of art; this is the area of cumulation, replication, distribution of artistic values; a system of selection and professional training of artists, socialization of the public, aimed at developing their ability to form images and skills in operating with them" [24]. It should be noted that traditionally artistic culture includes the creation of material and spiritual aesthetic values, primarily the sphere of art. In our opinion, this is a fundamentally wrong, limited and narrow approach to artistic culture, leaving behind its "board" the whole variety of cultural and axiogenic texts of culture, information and communication processes and phenomena occurring in modern artistic life.

One can confidently assert, and this confidence is confirmed by many facts and artifacts of culture, that the main trend in the system of artistic communications and the basis of culture of the 20th and even more the 21st century, on the one hand, is discreteness, the fragmentation of communication processes and phenomena, human alienation, and on the other hand, the paradox of the universal connection of telecommunications and the Internet, as well as the state of the world as a "global village". All this in the most strange and bizarre way affects the vital functions of culture and art, and first of all, the social and communicative function of modern artistic culture.

The basis of the style of such art projects is often the direct processes of the inner life of a person in a technogenic environment. The ideology of the artist's activity is changing: he creates not a work of art, but a communicative space that opens up almost unlimited opportunities to freely operate with ideas and images while dynamically changing form and even content. After all, the interactive dialogue in the "network" covers - or is ready to cover - an infinite number of participants, and with the connection of each of them, the art project is ready for an infinite number of updates. In this version of existence, it really

demonstrates that communication is a sphere without boundaries.

Since the 1990s, in contemporary art, the “art of the social turn” has become especially widespread, which has set as its goal the construction of intersubjective relationships between recipients and between recipients and the artist as the initiator of this kind of interaction [2]. Attempts to conceptualize these socially oriented artistic practices have been made by a number of critics, curators, and theorists: Nicolas Bourriaud (“relationship aesthetics”), Claire Bishop (“participatory art”), Susan Lacey (“the new genre of public art”), Suzi Gablik (“communicative aesthetics”), Maria Lind (“collaborative art”), Grant Kester (“dialogical art”), Scott Marsden (“community art”), and many others.

The communicative possibilities of art in the space of artistic culture are revealed by scientists in the aspect of the relationship between individuals: between the viewer and the author of the work, the viewer and the era of the creation of the work, the viewer and other viewers in the context of universal unity. In the works of researchers, artistic communication is mainly understood as a mechanism for cognition of the information that is “encoded” by the author in a work of art [2, 3, 6].

Attempts to consider participation as an aesthetic and artistic phenomenon (in the context of non-classical aesthetics) are being made by both art historians and media researchers in the United States and Western Europe. Within the framework of participatory aesthetics, various forms of creative interaction are distinguished, based on the physical activity of the participants (spectators, users, listeners) and aestheticizing this activity.

In existing approaches, participatory aesthetics is associated, in particular, with the avant-garde “aesthetics of refusal” from the author, from the work (for example, M. Duchamp, J. Cage), from the disunity and social isolation of people in society (N. Bourriaud). Participation is seen as the creative shaping of “social formations” [14, 19, 21, 23].

The idea of presenting “social formations” as an aesthetic activity was proposed by the above mentioned French art theorist N. Bourriaud in the mid-1990s. Bourriaud defines “relationship art” as “a set of artistic practices, theoretical and practical ones, that take as their starting point the whole of human relationships and their social context, and not just independent and private spaces” [4]. This concept presents a work of art as a “gratuitous gift”, which can take the form of collective meals, tea parties, meetings of comrades, parties, recruiting, team games, discussions and other types of social interactions. The work is understood as a form of interchange, interaction between the artist and the public. For example, R. Tiravanija turns art galleries into impromptu kitchens, F. Gonzalez-Torres invents artifacts for collective use, K. Hill presents services as art; no less notable art projects are presented by L. Gillick, V. Beecroft, F. Parreno, G. Orozco, J. Haaning, and others.

Participatory practices have a unique ability to form new communities, build new social ties that have been destroyed or lost, which would otherwise be impossible to create. According to Bourriaud, such art becomes an attempt to collect a fragmented reality into a positive social project [4]. For example, Katerina Sheda's work back in 2003 showed the power of synergy. The title of the work “There is Nothing There” (2003) literally repeats a phrase she once heard in relation to the village of Ponetovici near Brno in the Czech Republic with a population of 300 people. The lack of infrastructure, development strategy, social institutions gave rise to despair, alienation, apathy in its inhabitants. Having learned the typical daily routine of the inhabitants, the artist decided to conduct an unusual experiment. She invited people to do their daily routine, but synchronizing their actions in time and organizing broadcast through cameras. This simple game helped show people that big things can happen in small towns as long as everyone is working together.

According to Bourriaud, the quality of “relationship art” is determined not by its objective properties, but by the strength with which such art is able to resist the hegemony of capitalist ideology and mass consumer culture. The author is sure that by creating zones of free communication, interpersonal interchange, the artist stimulates the audience to reflect on ideas that are important for society, conceptualizes the value issues of reality. Bourriaud refers to K. Marx's term “gap”, meaning the ability of communities to avoid total control by capital (for example, with the help of barter, autarky, “black cash”, etc.). The scientist proposes to perceive the works of contemporary artists as a means of implementing the “social gap”: “the space of social relations, which, although it functions within the framework of a common system, offers opportunities for interaction that exceed those available in the system” [4 p. 16]. This becomes possible due to the fact that in such art projects “form is more important than objects, and processes are more important than reflections: gesture prevails over material goods” [4, p. 103].

Obviously, this state of affairs cannot but have a significant impact on the creative search of artists. They see one of their tasks in studying and demonstrating the impact of the communicative components of culture on a person, on his perception of reality, on his inner world [20]. Namely the actualization of the communicative function of culture determines the nature of the work of a number of contemporary artists. Their projects clearly demonstrate that the language of images, which was characteristic, first of all, for art, in modern society is becoming an effective way of communication in areas quite far from art: in politics, advertising, the image industry, etc. The directions of this kind of artistic experiments are quite diverse - this is modeling the types and forms of communication links, modeling the methods and mechanisms for transmitting information, as well as provocative art communication projects with the inclusion of viewers in the creative act. The variety of tasks set, the variety of methods and approaches to their solution allow artists, with a fairly clearly expressed technogenic nature of creativity, to maintain a lively pulsation of the sensory-emotional experience of the material they study.

As specific components inherent in oral speech practice, gesture, facial expressions, intonation are actively used in communicative art projects, i.e., elements that are not traditionally included in the arsenal of expressive means of fine art. In such projects, the emotionally colored spectrum of oral transmission of information is widely represented: there is not only a narration or representation of the object of study, but the artistic equivalents of an exclamation, shouting, question-answer, order, muttering, etc. In other words, artists include in the scope of their creativity countless types of oral transmission of information that a person turns to in a wide variety of life situations. Even when artists turn to traditional technologies, one can observe the free manipulation of their expressive possibilities outside the established rules, standards, and other stable skills and methods of working with them. This fundamentally distinguishes the range of artistic projects under consideration from works of traditional fine art that functioned according to the laws of written speech. It distinguishes them as much as the verified forms of written speech, with its strictly regulated stylistic features and conditions, differ from spontaneous, free oral communication, which is able to convey the general emotional tone of what is happening almost with the authenticity of a live report.

The search for the foundations of the artistic communication language is carried out using the study of the language of culture as a whole, by extrapolating the basic principles of the language of verbal communication to the visual language of fine arts. Possession of a single ‘language’ by partners is a condition for the implementation of a dialogue-relationship. The self-moving system of visual concepts organizes a common language field that determines the specific speech operations of the subjects of artistic communication - the viewer and the work of fine art [27].

In connection with the recognition of the possibility of a spontaneous form of communication between the artist and the

viewer through visual elements identical to the elements of oral speech, the space of artistic communication is radically changing - a fundamentally new system of such communication is being formed in the absence of pre-declared conditions. There is no need for officially designated exhibition halls with all the established rules and attributes for presenting the artist's work to the viewer; labeling with the exact designation of the name and other official "profile" information about the work disappears. They are replaced by variability, improvisation in the presentation of material, depending on the specific emotional reaction of the viewer.

By the beginning of the 21st century, fundamentally new forms of artistic expression appeared in art - various versions of media creativity: media art, net art, network art, etc. The relationship between the communicative sphere proper and art is expanding and becoming more complicated: it is no longer reproduction or modeling of communication enters the circle of expressive techniques and means, but the real sphere of communication itself becomes an integral part of artistic projects. "The angle of consideration of the problematics, which is tied to the combination of contemporary art, science and technology, is changing" [22]. Most clearly, these processes can be observed on the Internet. It becomes the main medium of activity for a number of network artists, such as the group Jodi. Network artists, owning Internet technologies, are well aware of the nature of this hyperstructure, which allows them to master its communicative possibilities as aesthetic ones. "They admire it and not only draw visual images from it, but also include its entire fragments in the fabric of their works" [16].

It should be noted that today's conceptual art is a manifestation of postmodern artistic consciousness, operating with alienated pictorial languages. The first example of such a manifestation is pop art, which operates with simulacra of mass culture. The nature for the paintings of pop artists is reality, already mediated by the mass media: advertising, photography, television, and therefore the reality of simulacra. The theory of mass communications and semiotics became the philosophical basis of pop art.

Conceptualists, and then their followers, sought to demonstrate that any event of everyday life, regardless of its significance, can be interpreted as an artistic act. It is important that this act be appropriately 'fit' in communicative institutions: the media, art criticism, etc.

The communicative principle in such art projects completely changes the nature of encoding artistic information: any elements of informative systems that are widely used in everyday life can be included in the context of an art project as a means of expression. For example, it is a running line with critics' statements about the artist, according to which the viewer was asked to imagine his work, or a screening of a failed film. This technique, in particular, is used in the video installation "Salons" by Y. Albert: chairs are arranged in rows in the auditorium, the viewer is waiting for the beginning, but there is no film, there is only a soundtrack - the author reads Denis Diderot's *Salons* aloud.

The role of the informative beginning in modern culture is also demonstrated by another project by Yu. Albert - a series of performances "Excursion blindfolded". The only condition set by the artist for the spectators - participants of the project, was that they walked through the halls without seeing the objects described. For an hour, the participants of the Blindfold Tour tried to imagine or remember the masterpieces that the guide told them about. The communicative model proposed by the artist was intended to show the real impact of information on human consciousness, including attitude to art. This series of performances was held in various museums around the world, in particular, in the Berlin Art Gallery, in the Ludwig Museum in Cologne, and was documented everywhere. Filming performances, also performed blindfolded, was a kind of video report and reproduced the state of the audience and the nature of their perception of what was happening.

In this context, special mention should be made of Net-art, an interesting, actively developing, dynamic genre of contemporary art. Of course, its name has not yet settled down. Now the term *net-art* is commonly understood as an art project, the necessary condition for the existence of which is the Internet. The life of such projects takes place exclusively in the network. This direction of art is the most interactive of all existing ones, and today most network projects are dynamic audiovisual structures that instantly respond to changes in the external environment.

Modern network art is formed at the intersection of various, sometimes contradictory phenomena: individual creativity and new technologies, mass culture and subculture. In a broad sense, many different phenomena of digital graphics and media art can be attributed to net art, since almost all of them are created by digital means exclusively for exposure on the Internet, there is no "output" on paper or canvas, the monitor becomes the canvas for these works, and the exhibition space is the Internet. This kind of art is practically inseparable from technology, from its communication channel - the Internet.

M. McLuhan believes that namely through technological assimilation, "digestion" of reality, culture is comprehended in a new way: "When our feelings materialize in the form of certain technologies, a new interpretation of culture occurs as the latter are socially assimilated" [17]. If to look at the phenomenon of net-art through the prism of the concept of McLuhan, net-art will appear as such a social assimilation, as a result and through which a new interpretation of culture arises.

Today, net-art is one of the most dynamic genres of art. Multimedia network projects not only pose questions to the viewer (as happens in traditional art), but also, having received feedback, instantly respond to it, involving the viewer in the communication process. Its interactivity corresponds to the space of communication that has changed under the influence of virtualization. Net-art in some ways resembles some traditional art genres (for example, performance, video installation, etc.), but does not become one of these types, as it has fundamentally new opportunities for communication that have emerged as a result of the combination of art and Internet technologies.

Net-art can communicate with the viewer using aggressive means, sometimes resembling computer viruses or hacktivist flash mobs, but the goal is always not to capture, but to shatter the usual perception illusions created by the media, popular culture, and involve the viewer in a dialogue. The viewer voluntarily accepts the game offered by the artist and can leave it at any moment, while the artist, in turn, does not try to present his game as reality and always reminds that this is a game, even when it seems absolutely real. The spectator-participant of net-art works is not passive (as, for example, the spectator-consumer of the media reality created by the media), at every moment of time he chooses, thinks, creates his work. Thus, net-art remains a creative principle that encourages reflection [13].

Transforming the ideas of the avant-garde trends in the artistic culture of the 20th century, Internet art re-masters the concept of a dialogue between a work of art and the viewer, using for this such technological capabilities of the network as mobility, variability, and procedural art forms. The constant updating of digital information has determined the emergence of such new aesthetic categories as "simulation", virtual reality, artificial intelligence, expressing the main formative principles of network works. Network art operates within a decentered, dynamic and changeable cyberspace. The relationship between artistic and technological factors in network works is based on the virtual nature of the art form. The virtuality of Internet art leads to the fact that it functions as a socially active, public space in which there is a convergence of artistic, technological, and social aspects of art and reality. Under the influence of the typological properties of network art, the status and role of the artist, viewer and work have changed. Network art acquires meaning and significance through the efforts of the user. An experimental and interactive approach to creativity, awareness of one's own artistic context, communicative orientation, the use of modern

technologies, collectivism are the characteristic features of network art.

In particular, in the theory of contemporary fine art, the viewer's communication with a work of fine art is revealed in the aspect of the realization of the meeting of the finite and the infinite. A work of art is organized as a meeting place between the human and the Absolute principles, but only the situation of communication with the viewer actualizes this potential communication mechanism. The communicative nature distinguishes all phases of the work of art existence: during the period of its creation, it becomes both a process and a result of a dialogue between the artist and artistic material; in the future it appears as a process and result of a dialogue with the viewer.

In the process of artistic dialogue-relationship, the viewer and the work of fine art reveal the ability to change their communicative properties. Dissolving increasingly more communicatively, the work and the viewer turn from the addresser and addressee into speech partners, and then co-authors of the art text [3]. The co-authorship of a viewer and a masterpiece of fine art leads to the realization of a dialogue-relationship at the level of co-existence of finite and infinite beginnings.

The paradigm of Modern gave the artist the position of the only and unique author-inventor. The times of Modern were guided by the values of the creative activity of the individual, the versatility of activity, and the unique individuality; this era appreciated continuous activity, fundamental changes, the speed of change. The *Art Nouveau* artist was imbued with the spirit of invention and pursued the goal of creating new techniques, a peculiar and unique art language [9].

In the Postmodern paradigm, the artist loses his honorable exclusive position as a demiurge-inventor and acts as a screenwriter, scriptor, and analyst. Today, when photographic equipment and a computer have become available to the majority and the boundaries of official art have expanded much, anyone can be an artist. The postmodern art world values in an artist not the ability to invent (as in Modern era), but the ability to choose and combine. Postmodern creativity is staging a game with given cultural texts and codes, context [7, 8]. The Postmodern paradigm has given the artist the role of a researcher who looks for ideas, values, and stereotypes, studies them, plays with them and offers them to the viewer.

In the Postmodern, the subjective thought of the author ceases to have its former meaning, the very figure of the author is eliminated, and there are discussions about the "death of the author". Postmodern destroys the clear modernist rules for constructing a work of art and turns the work into a hypertext (representation of information in the form of a connected network, where the reader freely non-linearly paves his way), an "open work", a mosaic of cultural images and meanings, freely interpreted by the viewer. A postmodern text is not a finished work, but a living process of the artist' interaction with the text and the viewer, leading to the birth of the text here and now. The work of art turns into a text only when the viewer understands the quotes and begins to create the meaning of the work (interpret) [5, 10].

As to the viewer's position, in the Premodern paradigm, the viewer was an active contemplator of signs and symbols. In Modern era, he was an outside observer, he was passive: "the viewer must consider art in reverent silence, placing it against the background of a neutral white gallery wall and completely detaching himself from the social environment and even from his body and gender, all this in order to strengthen the impact of the work, enhance its aesthetic value" [14]. The Postmodern paradigm gives the viewer the role of a co-author and figure-character of the work. The spaces of environments and happenings turn the viewer into an active participant, and the possibility of multiple interpretations of an open work makes them involved in the process of creation.

Thus, the logic of modern research into the problems of communication leads to the need for a close study of artistic culture as a communication between the viewer, the work of art, and the artist. The specificity of contemporary art is reflected in the peculiarities of the construction of subject-object relations, the organization of the density and length of the communicative space, which are directly related to the characteristics of contemporary art. The study of the communicative space of art makes it necessary to analyze the essence of the components that ensure its viability.

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FROM OUTSIDERHOOD TO SUCCESSFULNESS: DEVELOPMENT ISSUES (TEACHERS' COMMUNITY POINT OF VIEW)

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Abstract: The article reflects and interprets the results of the survey of 300 teachers of different specialties organized to clarify the typology of outsiders. The questionnaire, which contains 148 psychological parameters typical for outsiders, was designed to be interpreted according to a five-point system. As a result of the factor analysis of 32 parameters, it was possible to develop seven types. With the help of these parameters, the potential for positive promotion from outsiderhood to successfulness was revealed, being considered a logical path for people to act in the process of self-improvement of the identified respondents. It has been concerned that the "Outsiderhood-Successfulness" continuum contains a subconscious reflection of the psychology state of the community, the pedagogical one in particular. The possibility of a social and psychological improvement is reflected in this way. It can be used to significantly improve one's life, improve the situation by working hard for the purpose of self-improvement. The negative features of the process have been revealed, such as a tendency to tantrums, feelings of resentment, isolation, individualization of life, inability to finish tasks, a tendency to blame, mistrust, self-absorption, lack of initiative, silence, restlessness, self-doubt, procrastination, a tendency to take offense and not to admit mistakes. The best socio-psychological parameters of this process are such traits as sociability, diligence, sense of self-worth, painful experience of defeats, intelligence.

Keywords: cognitive process; continuum "Outsiderhood-Successfulness"; opposite poles of life; socio-psychological parameters; socio-psychological improvement; social exclusion.

1 Introduction

Outsiderhood and successfulness of the personality belong to the most widely spread phenomena that function in society. Overcoming the outsiderhood of a personality in society by means of identifying and activating the hidden possibilities of a socially rejected personality, that allows increasing his/her life needs, improve quality of life, realize his/her potential, and thus achieve successfulness is the most urgent and, at the same time, complex social and psychological problem. Outsiderhood and successfulness can be considered to be opposite poles of human life. Theoretically, there should be a path between them, that can be represented on a certain continuum, in which the intermediate links between the extreme points will be displayed. The authors successfully observed similarities in a teachers' survey, conducted on the topic. If we manage to depict outsider's movement toward successful society member, then this will suggest a deeper understanding of the features of the transition from one extreme point to another, which is observed in the survey data of pedagogical workers.

2 Literature Review

It is recognized in sociological research that factors similar to those described will form a system of parameters, that, as a result of the mechanisms' of social influence action, can spread to wide sections of the population and change the political vectors of states, their stratification and have influence on the deepening of social alienation, changes in social systems and configurations, provoke significant social changes (Giddens, Luhmann, Shtompka) [4, 11, 24], deepen social anomie, the feeling of being outside the process, in a state of loneliness and despair in one's strength (Schwalb) [23], psychological consequences of neglect on the side of both individuals and the society

(Tomchuk, Yakubina) [26, 28], feeling of rejection as a result of social exclusion together with the exclusion outside the society (Oksamytna, Libanova, Levitas, Silver) [7-9, 16, 24]. However, the studies mentioned above seem to conduct the analysis of the outsiderhood's components and reflect them rather than the phenomenon itself.

The aim of this type of social and psychological research is to reveal the essence of the phenomenon of the components of outsiderhood as a result of social exclusion, one may even say "rejection". The interpretation of data suggests that these people were left alone with their problems by society and were pushed out of its borders [17]. A detailed description of inactivity states and their differentiation with similar social and psychological phenomena has been considered in the works of such researchers as T. Artiomova, V. Larionova [2, 6]. More specifically, revealing the cause-and-effect social exclusion project, the concerted action phenomenon of outsiderhood factors has been observed in the scientific works of the following researchers: Likhonosova, O. Makarova, S. Oksamytna [10, 12, 16]. It is noteworthy, that in the literature, attention is paid not only to the description of the social outsiderhood problem, but also to the reverse phenomenon that has been interpreted as a social inclusion process, including social education [3, 5].

The personality problem in the context of its successfulness has been studied from the philosophical, pedagogical, and psychological points of view by S. Maksymenko, H. Mykhailyshyn, V. Rybalka, T. Tytarenko, and others.

3 Materials and Methods

A survey for 300 teachers who teach different subjects was conducted in order to observe the development from outsider status to successfulness. A questionnaire was compiled containing 148 parameters that are typical for the above mentioned "outsiders" which were supposed to be evaluated according to a five-point system (Appendix A).

It is important to mention that teachers as specialists of psychological and pedagogical direction and active members of their communities acted as experts who are able to assess the character and behavior of the persons which, with a high level of probability, can be recognized as outsiders.

According to survey data, 32 features were selected, the probability of which in evaluated people's character was determined by more than 3 points. A factor analysis was conducted in the frameworks of these features, which led to the identification of seven factors with a total contribution to the variance of 51.4%. The content of the factors reflects the main types of outsiders from the point of view of the respondents.

Table 1: Factor selection method

Component	Initial values		
	Total	% dispersion	Total %
1	5.072	15.849	15.849
2	3.069	9.592	25.440
3	2.330	7.280	32.720
4	1.774	5.545	38.265
5	1.579	4.933	43.198
6	1.402	4.382	47.580
7	1.226	3.831	51.410

The authors studied the phenomenon of outsider types occurrence in the process of evaluation of people with passive consciousness, as if they still have effective mechanisms of a certain system, which is a specific for society.

"The functioning of any socio-economic system is carried out in the conditions of a complex interaction of a set of internal and external factors. Since a factor is the cause, the driving force of some process or phenomenon, which determines its nature, the

The survey of teachers showed that they clearly see the structure of the transition process from purely outsider forms of human behavior to more viable and expedient ones. This process is gradual and has the character of an improvement, which was observed by the teachers during the survey. The factor analysis of their answers showed that an optimistic vision of a person's transition to higher and more effective forms of behavior exists in the teachers' collective consciousness.

5 Conclusion

- 1) The continuum "Outsiderhood-Successfulness" has a subconscious reflection in the psychological community, in particular, the pedagogical one. In such a way, the potential possibility of a social and psychological improvement is observed, with the help of which one can significantly improve own life, improve the situation by working hard for the purpose of self-improvement.
- 2) The pedagogical community, acting as experts, reveals its optimistic view of the potential opportunity of each person to move to a higher level, to make himself/herself better and more effective in the social dimension.
- 3) As a result of the factor analysis of 32 parameters, seven types were identified, with the help of which the possibility of advancement from outsider status to successfulness was indicated as a logical path of a person's progress in the process of self-improvement.
- 4) The worst socio-psychological traits for the process of self-improvement are a tendency to hysterics, a sense of resentment, isolation, isolated individual life, the inability to finish tasks, a tendency to blame, mistrust, self-absorption, lack of initiative, silence, restlessness, self-doubt, procrastination, a tendency to take offense, a tendency not to admit own mistakes.
- 5) The best socio-psychological parameters of this process are such traits as sociability, diligence, benevolence, a sense of self-worth, painful experience of defeats, intelligence.

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Primary Paper Section: A

Secondary Paper Section: AM

Appendix A (Questionnaire)

Dear colleague!

There are people around us that could be called outsiders – people, whose **behavior and consciousness are based on the feelings of loss, passivity, identifying their own place in the society as an outsider, disbelief in their own capabilities, pessimistic expectations.** Please identify a person from your surrounding (not mentioning his/her name and surname), who, in your opinion, best of all corresponds to the following characteristic.

Estimate the degree of expression of the below listed features by cycling one of the numbers:

1 – the trait is not typical, 2 – the trait is partly typical, 3 – the trait is more or less typical, 4 – the trait is quite strongly typical, 5 – the trait is very typical

1.	Introverted	1 2 3 4 5	75.	Stubborn	1 2 3 4 5
2.	Touchy	1 2 3 4 5	76.	Intended	1 2 3 4 5
3.	Inclined to transfer responsibility to others	1 2 3 4 5	77.	Unrealized	1 2 3 4 5
4.	Inclined to make accusations	1 2 3 4 5	78.	Able to defend his/her position	1 2 3 4 5
5.	A constant feeling of resentment is inherent	1 2 3 4 5	79.	Cannot obey	1 2 3 4 5
6.	Inert	1 2 3 4 5	80.	Trying to face the situation	1 2 3 4 5
7.	Careless	1 2 3 4 5	81.	Anxious	1 2 3 4 5
8.	Reserved	1 2 3 4 5	82.	Does not always finish tasks	1 2 3 4 5
9.	Faint	1 2 3 4 5	83.	Apolitical	1 2 3 4 5
10.	Feeble	1 2 3 4 5	84.	Benevolent	1 2 3 4 5
11.	Realistic	1 2 3 4 5	85.	Persistent	1 2 3 4 5
12.	Self-absorbed	1 2 3 4 5	86.	Consciously avoids certain activities	1 2 3 4 5
13.	Unwilling	1 2 3 4 5	87.	Purposeful	1 2 3 4 5
14.	Weak-spirited	1 2 3 4 5	88.	Hardworking	1 2 3 4 5
15.	Spiritless	1 2 3 4 5	89.	Inclined to introspection	1 2 3 4 5
16.	Silent	1 2 3 4 5	90.	Feeble	1 2 3 4 5
17.	Self-sufficient	1 2 3 4 5	91.	Modest	1 2 3 4 5
18.	Inherent egocentrism	1 2 3 4 5	92.	Satisfied with the current situation	1 2 3 4 5
19.	Arguing with others	1 2 3 4 5	93.	Shows incompetence	1 2 3 4 5
20.	Vindictive	1 2 3 4 5	94.	Inclined to accept life as it is	1 2 3 4 5
21.	Tries to finish tasks	1 2 3 4 5	95.	Conflicting	1 2 3 4 5
22.	Unscrupulous	1 2 3 4 5	96.	Indifferent	1 2 3 4 5
23.	Restless	1 2 3 4 5	97.	Stingy	1 2 3 4 5
24.	Ideological	1 2 3 4 5	98.	Aggressive	1 2 3 4 5
25.	Talkative	1 2 3 4 5	99.	Inconsistent	1 2 3 4 5
26.	Predicted	1 2 3 4 5	100.	Sets himself/herself goals that he/she cannot achieve	1 2 3 4 5
27.	Fighting for the truth	1 2 3 4 5	101.	Abrupt	1 2 3 4 5
28.	Implacable	1 2 3 4 5	102.	Intolerant of accusations	1 2 3 4 5
29.	Makes fun of himself/herself and others	1 2 3 4 5	103.	Capable of actions and acts of protest	1 2 3 4 5
30.	Sociable	1 2 3 4 5	104.	Envious	1 2 3 4 5
31.	Able to defend his/her rights	1 2 3 4 5	105.	Complains about failure	1 2 3 4 5
32.	Avoids certain activities	1 2 3 4 5	106.	Attentive	1 2 3 4 5
33.	Gets frustrated quickly	1 2 3 4 5	107.	Squealer	1 2 3 4 5
34.	Thoughtless	1 2 3 4 5	108.	Sincere	1 2 3 4 5
35.	Dependent	1 2 3 4 5	109.	Pays little attention to others	1 2 3 4 5
36.	Uncommunicative	1 2 3 4 5	110.	Stale	1 2 3 4 5
37.	Satisfied with his/her position	1 2 3 4 5	111.	Hard	1 2 3 4 5
38.	Denies authorities	1 2 3 4 5	112.	Likes to procrastinate	1 2 3 4 5
39.	Confused	1 2 3 4 5	113.	Can settle for the smallest	1 2 3 4 5
40.	Has achievements in the areas of activity	1 2 3 4 5	114.	Unambitious	1 2 3 4 5
41.	Convinced of his/her rightness	1 2 3 4 5	115.	Shy	1 2 3 4 5
42.	Cunning	1 2 3 4 5	116.	Painfully experiences defeats	1 2 3 4 5
43.	With a sense of self-worth	1 2 3 4 5	117.	Feels guilty	1 2 3 4 5
44.	Used to losing	1 2 3 4 5	118.	Negatively disposed	1 2 3 4 5
45.	Compliant	1 2 3 4 5	119.	Inclined to take offence	1 2 3 4 5
46.	Not satisfied with the existing state of affairs	1 2 3 4 5	120.	Inclined to tantrum	1 2 3 4 5
47.	Indifferent	1 2 3 4 5	121.	Does not always admit mistakes	1 2 3 4 5
48.	Considerate	1 2 3 4 5	122.	Inclined to remorse	1 2 3 4 5
49.	Agrees with everything	1 2 3 4 5	123.	Open	1 2 3 4 5
50.	Selfish person	1 2 3 4 5	124.	Impulsive	1 2 3 4 5
51.	Sad	1 2 3 4 5	125.	Secretive	1 2 3 4 5
52.	Not inclined to make an effort	1 2 3 4 5	126.	Angry	1 2 3 4 5
53.	Does not set goals	1 2 3 4 5	127.	Impatient	1 2 3 4 5
54.	Satisfied with his/her life	1 2 3 4 5	128.	Phlegmatic	1 2 3 4 5
55.	Well-balanced	1 2 3 4 5	129.	Helpless	1 2 3 4 5
56.	Defenseless	1 2 3 4 5	130.	Unkind	1 2 3 4 5
57.	Has no sense of self-worth	1 2 3 4 5	131.	Tends to complain about life	1 2 3 4 5
58.	Unscrupulous	1 2 3 4 5	132.	Direct	1 2 3 4 5
59.	Willing to discuss his/her problems	1 2 3 4 5	133.	Tends to blame everyone	1 2 3 4 5
60.	Likes to have free time	1 2 3 4 5	134.	Is ashamed of failure	1 2 3 4 5
61.	Doesn't judge himself/herself and other people	1 2 3 4 5	135.	Has no friends	1 2 3 4 5
62.	Suffers humiliation	1 2 3 4 5	136.	Lives his individual life	1 2 3 4 5
63.	Depressed	1 2 3 4 5	137.	Critical	1 2 3 4 5
64.	Has some achievements	1 2 3 4 5	138.	Trying to avoid failure	1 2 3 4 5
65.	Pessimist	1 2 3 4 5	139.	Does not hide failure	1 2 3 4 5
66.	Shows selective activity	1 2 3 4 5	140.	Passive	1 2 3 4 5
67.	Relaxed	1 2 3 4 5	141.	Does not obey the authorities	1 2 3 4 5
68.	Has doubts about himself/herself	1 2 3 4 5	142.	Dependent	1 2 3 4 5
69.	Unrealistic	1 2 3 4 5	143.	Fights for himself/herself	1 2 3 4 5
70.	Impatient	1 2 3 4 5	144.	Capricious	1 2 3 4 5
71.	Apathetic	1 2 3 4 5	145.	Intelligent	1 2 3 4 5
72.	Bad-tempered	1 2 3 4 5	146.	Unstable	1 2 3 4 5
73.	Skeptical	1 2 3 4 5	147.	Cannot think logically	1 2 3 4 5
74.	Distrustful	1 2 3 4 5	148.	Calm	1 2 3 4 5

FORMATION OF SUBJECT COMPETENCE OF FUTURE PEDAGOGUES IN THE PROCESS OF STUDYING THE SYNTAX OF THE UKRAINIAN LANGUAGE

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Abstract: The issue of subject competence in the process of studying the syntax of Ukrainian languages is considered from the standpoint of the competence approach. It is shown that one of the linguistic levels that occupy an important place in the formation of communicative competence is the syntactic level. The study made it possible to conclude that the greatest potential for the formation of syntactic competence is characteristic to the study of simple complicated and complex sentences. The article considers many examples of the practical application of this approach in the process of educational activity.

Keywords: interactive teaching methods; language competence; linguistic phenomena syntax.

1 Introduction

The leading one in modern language didactics and the educational process is the competency-based approach, the successful implementation of which assumes that the educational activities of those seeking education, focused on improving their competencies, will contribute to intellectual, spiritual and cultural development, the formation of the ability to quickly and constructively respond to important social demands and needs of today. The formation of an intellectually developed, linguistically literate individual who will become successful, competitive and valuable in the labor market, having acquired not only the necessary general and professional competencies, but also the ability to apply them in life to solve practical tasks, remains relevant in the training of a highly qualified specialist.

"The main concept of the competence approach is to shift the emphasis from the totality of knowledge to the ability to perform certain functions using knowledge" [1, p. 183–184]. This, as N. Butenko claims, changes the ultimate goal of graduates education, reformatting "from content to results, from knowledge to personality development" [1, p. 184].

Today, it is important for an education seeker to learn to independently acquire knowledge and master practical skills, to constantly improve subject competences. In this context, one of the main tasks of training a future philologist, lexicographer is the formation of a linguistic personality, who has the skills of independent research work, is able to freely and in communicatively justified manner to express his thoughts in any situation, observing the norms of literature and language prospects of cultivating these qualities already in their wards - students. M. Pentylyuk singles out the following among the professional skills and abilities that students of philological faculties of universities must acquire: "to study linguistic and literary facts and phenomena in their systemic connection; logically, consistently, in accordance with the norms of literary speech, form creative, analytical thinking, philological taste; actively apply learning methods and techniques in practical activities; to conduct scientific research in the field of linguistics, literary studies, psychological and pedagogical disciplines, using various methods of scientific research, to develop the need and ability to independently supplement one's knowledge in the field,

to be mobile to various innovations, that is, to be professionally competent" [10, p. 294–295].

One of the linguistic levels, which "occupies an important place in the formation of communicative competence in its most important components - language and speech competences" [9, p. 88], is a syntactic level. The teacher-linguist, taking care of the formation of the subject competence necessary for successful self-realization, the implementation of intellectual, creative, research initiatives of the future teacher-philologist, should orient the student to thorough knowledge of the regularities of combining words and building sentences, as well as knowledge of the expressive possibilities of syntactic structures and the ability to use them in different speech situations.

The theoretical basis for the implementation of the competence approach in language education is laid in the works of such linguists as O. Horoshkina, S. Karaman, L. Matsko, M. Pentylyuk, O. Semenog, and others. Scientific searches of Ukrainian scientists and practitioners N. Bibik, L. Vashchenko, O. Lokshina, O. Ovcharuk, L. Parashchenko, O. Pometun, S. Trubacheva in the field of theoretical and applied aspects of the implementation of the competence approach are collected in the work "Competency approach in modern education: World experience and Ukrainian perspectives", edited by O. Ovcharuk [8].

The main components of language competence became the objects of study by A. Bogush, M. Vashulenko, S. Karaman, L. Matsko, and M. Pentylyuk.

The method of implementation of the competence approach and the formation of the language competence of the individual is highlighted in works devoted to the problematic (O. Bilyaev, I. Vykhoanets, S. Yermolenko, K. Plysko), integrated (O. Bilyaev, L. Varzatska, L. Dvoretzka, O. Savchenko), cognitive-communicative (O. Horoshkina, M. Pentylyuk), interactive (A. Granytska, L. Pyrozhenko, O. Pometun) learning, learning to develop coherent speech (L. Varzatska, G. Ivanytska, V. Kapinos, S. Omelchuk, N. Pashkivska), text-based language learning (O. Horoshkina, L. Matsko, M. Pentylyuk).

Directions for normalizing the Ukrainian speech of lyceum students on the basis of the competence approach and the formation of a competent speaker in Ukrainian language classes are outlined in the methodical manual of O. Horoshkina, N. Bondarenko, and L. Popova [4].

L. Sidun [12], V. Lugovy [7] raise the question of the relevance of the introduction of the competence approach as one of the factors of ensuring high-quality higher education.

The spectrum of problems related to the theory and practice of the competency approach in higher education, based on the analysis of normative documents of the Ministry of Education and Science of Ukraine, a number of scientific and scientific-methodological publications in Ukrainian domestic and foreign publications, and own scientific and pedagogical experience, are revealed by O. Druganova, O. Zhukova, L. Ivanenko, A. Komyshan, T. Lutaeva, O. Nalyvaiko, T. Nekrashevych, Ya. Shvedova, N. Shchokina, E. Abramova [18].

In the aspect of competence education, designed to form a skilled communicator, the attention of scientists is drawn to the syntactic level of language, which is at the top of the hierarchy of linguistic levels and reveals the potential functional capabilities of units of lower levels, and also fully realizes the communicative function of language [6; 14]. M. Pentylyuk and T. Hnatkovich clarify the role of syntactic theory in the formation of language competence of students and its influence on their communicative abilities and skills through the prism of psychological processes that occur during the acquisition of school syntax [9, p. 88]. T. Tyutyuma studies psychological factors of formation of syntactic competence of future teachers

of language [15]. The researcher notes that the university syntax teaching method is generally less developed than the school one [15, p. 232]. Factors that determine the relevance of the researched topic are the educational trends in the development of linguistics and linguistic didactics, which relate to the study of syntactic units in the process of forming linguistic and communicative skills, as well as the need to take into account the competence approach to the study of the syntax of the Ukrainian language with the active involvement of innovative forms, methods, and teaching tools.

The purpose of the article is to investigate the means of forming the subject competence of future language teachers during the study of the syntax of the Ukrainian language.

Achieving the formulated goal involves the implementation of the following tasks: to analyze the scientific literature on the researched problem and to find out the peculiarities of the competence approach in the professional training of future philologists; to identify the conditions for the effective formation of the subject competence of education seekers in the process of studying the syntax of the Ukrainian language; to select a set of linguistic and communicative exercises and tasks designed for the formation and improvement of the subject competence of future lexicographers.

2 Method

The implementation of the set tasks was made possible by the use of the following research methods: analysis of scientific and methodological literature, systematization of the obtained information, creation of a theoretical model of the implementation of the competence approach to the study of syntax, development of a system of exercises and tasks for future language teachers, pedagogical observation and generalization of the experience of using the chosen methodology.

3 Results and Discussion

The text-centric orientation of modern language education actualizes the formation of syntactic competence, which, according to V. Sydorenko, "is one of the main subject competencies in the system of language knowledge, abilities and skills necessary for students in various situations of communicative discourse, which involves the ability to use oral and written literary language, to use the necessary arsenal of syntactic linguistic units of different structural levels (phrases, sentences, text, complex syntactic whole), syntactic constructions of certain types and connectives (conjunctive, non-conjunctive, compound, complex subordinate clauses, complex sentences with different types of conjunctions, etc.) taking into account functional and stylistic varieties of speech according to the topic, purpose, communication situation, leading genres of communication" [11, p. 8].

The greatest potential for the formation of syntactic competence is the study of simple complicated and complex sentences. Elaborating simple complicated sentences, students form knowledge about complicating components, the ability to recognize and analyze them, determine their syntactic role, means of their expression, acquire practical skills to properly shape them in intonation and punctuation, construct and use them appropriately in various styles of oral and written speech. Working on a complex sentence involves assimilation of information about a complex sentence, development of skills and abilities to recognize and distinguish different types of them in the text, construct them in accordance with the communicative task and use them in speech, replace them with synonyms and transform them according to the tasks, punctuate, perform syntactic analysis.

To implement the competence approach in the process of studying syntax, it is important to take into account two plans of each syntactic phenomenon: its formal-grammatical and structural-semantic indicators (language competence) and communicative parameters (speech competence). This will enable the learner to study the syntactic structure of the language

as a dynamic, procedural system, to investigate the use of syntactic units in various speech acts, which will contribute to the formation of the ability to correctly and appropriately use the syntactic means of the language in future philologists, to use various types of syntactic constructions in their own speech, taking into account the expressive possibilities of appropriate units and observing language norms.

The effective formation of subject competence on the material of syntax in future language teachers will be facilitated by the use of theoretically grounded and proven in practice traditional and innovative methods and techniques of language learning in their systematicity and optimal combinations.

In the process of analyzing phrases, sentences, and texts and preparing to create one's own oral or written statements, the method of evidentiary narration is of great importance, during which a reasoned explanation of linguistic syntactic phenomena takes place, accompanied by the analysis of examples, the demonstration of tables and diagrams. With the help of questions, the teacher can not only check the students' assimilation of certain theoretical information, but also stimulate them to independently analyze linguistic phenomena and formulate generalizations and conclusions. It is important that students make the right conclusions about certain problematic issues raised in the process of storytelling.

The method of observing linguistic phenomena is a method by which the future philologist acquires knowledge based on independent analysis of linguistic phenomena, activating his mental powers. Constant observation of syntactic units, concepts and phenomena and carrying out their analysis helps to perceive and understand the information contained in them, to distinguish its main and clarifying parts, to determine the unity of the content and form of expression, to learn the essence of linguistic facts, phenomena, processes, to realize the connection between them and the theoretical conclusions that follow from them, to find out the meaning of the syntactic level of the language system in speech, to trace its connections with other levels and the leading role of its units in the organization of speech. A linguistic experiment is a variant of the method of observation of language phenomena, which justifies itself primarily in the work on syntax and stylistics, activating the cognitive activity of students, their independence in solving the assigned tasks, and contributing to the conscious assimilation of theoretical material with the inevitable projection of it into practical activity.

Modern Ukrainian language didactics has enriched the methodological arsenal of the lexicographer with interactive teaching methods. Interactive teaching methods can be defined as those built on the close interaction of all participants in the educational process according to the "subject"- "subject" scheme. Necessary conditions in the process of interactive learning are a clear plan of action, specific tasks and cooperation.

The interactive teaching methods applied during the study of syntax make it possible to interest the participants of the educational process, activate their cognitive abilities, and achieve a high expected result of assimilation of the program material. Methodically correct use of interactive methods allows the teacher to create learning conditions under which each student feels his intellectual and creative ability, that makes his educational activity productive.

The following methods and techniques of interactive learning are valuable: searching for the necessary information, educational dialogue as a synthesis of thoughts, mutual teaching, reflection in the form of a reflective conversation, discussion, free microphone, work in small groups, brainstorming, unfinished sentences.

A significant presence in the methodology of studying syntax as a branch of language science and in current school textbooks and manuals for higher education is characteristic for the method of exercises focused on repetitive performance of actions with the aim of acquiring knowledge and developing language and speech abilities and skills. Namely the repeated appeal of

education seekers to the form of practicing the possibilities of using syntactic units and the necessarily dynamic nature is the most important advantage of these forms over other educational methods.

Taking into account the specifics of the syntactic units of the language, the need for competence reorientation of language education to the active educational activity of the students, the following types of language-communicative and language-cognitive syntactic exercises can be distinguished:

- Analytical - they involve the following: performance of generalization-transformation tasks with syntactic units (structural-semantic analysis of simple, simple complex and complex sentences; observation of the intonation pattern of simple and complex sentences; compositional and content analysis of the text; characterization of language features and syntactic-stylistic analysis of the text canvas; emotional and expressive text analysis; complex syntactic analysis of texts of various types, genres, styles; functional text analysis);
- Reproductive – they involve: the analysis, correction and transformation of educational texts of various styles (restoration of the logical-structural sequence of sentences in the text, replacement of unjustified word usage; elimination of stylistic inaccuracies in the text; development of speech competence; elimination of logical-semantic contradictions);
- Creative and constructive - performing tasks to supplement or build one's own statements; exercises can be constructive (comparison, restoration, construction, reconstruction, modeling) and educational and productive (problem-search, search-cognitive, research-search, research-conclusion, grammatical transformation), as well as actually creative (building one's own statements).

Therefore, in the process of forming the subject competence of future philologists on the material of studying syntax, the optimal ratio of exercises of an analytical, reproductive, and creative-constructive nature will require from the students both the ability to reproduce ready-made information and creatively apply knowledge, use it in new communicative situations, and master methods of activity, necessary for performing exercises on the transformation of sentences and texts according to the task, editing, writing texts of different styles, composing monologues, dialogues, etc.

During the study of the discipline "Teacher's Spelling Competence", one of the content modules of which is "Syntax and Punctuation of the Ukrainian Language", L. Derkach and R. Zinchuk practice structuring the types of activities provided for practical classes, according to the levels of educational goals of B. Bloom's taxonomy (knowledge, understanding, application, analysis, synthesis, evaluation), which enables the participants of the educational process to independently choose the pace, means, sequence of tasks and their level of complexity, and also ensures that the individual abilities of the participants of the educational process are taken into account [3].

Z. Stolyar quite rightly emphasizes the importance of the work of future lexicographers "on the development of the skills and abilities of text creation, text addition, text restoration, and text research: creating texts of various genres and styles using syntactic units, supplementing the text with syntactic constructions, replacing some units with others using syntactic synonymy etc." [14]. The researcher defines "scientific research work of students as one of the didactic conditions for the growth of their professional linguistic and communicative competence, since its result is an unpredictable and creative solution to educational problems that arise in the process of acquiring knowledge" [14].

Studying the structural and semantic features of sentences is practically impossible without taking into account the intonation and punctuation aspect. The future language teacher must "learn to "see" the syntactic structure of a complex sentence, "hear" the intonation of what is written, understand the meaning of each

component of the sentence, as well as the sentence and the text as a whole" [5, p. 8], understand punctuations in terms of their relationship with the syntactic structure of the sentence and the intonation features of the utterance, forming language sense and spelling intuition.

In the modern educational process, a highly qualified teacher of the Ukrainian language must not only have deep theoretical knowledge of the subject, the necessary practical skills and abilities, but also possess the appropriate level of teaching methods. For this, the student needs to familiarize himself in detail with the educational programs – "a single set of educational components planned and organized by the institution of general secondary education for students to achieve learning outcomes" [3], as well as with school textbooks.

Authors of current educational programs on the Ukrainian language associate the effectiveness of education with the implementation of the competence approach, which involves shifting the emphasis from the accumulation of normatively defined knowledge, abilities and skills to the production and development of the ability to act, apply experience in specific conditions. Thus, the model educational program "Ukrainian language. 5th-6th years of study" for institutions of general secondary education (authors: Zabolotny O., Zabolotny V., Lavrynychuk V., Plivachuk K., Popova T.) is based on the principles of the values of the Ukrainian people, personally oriented, competent, axiological, active, integrative approaches; it provides for the implementation of requirements for mandatory learning outcomes in the linguistic and literary field of education; takes into account the continuity between training cycles, focuses on the competence potential of the linguistic and literary educational field [17]. Addressing fifth-graders in the preface to the Ukrainian language textbook, O. Zabolotny and V. Zabolotny urge students to travel along linguistic paths, while not forgetting their own research potential. The instructions of the authors of the textbook to students are important for improving the pedagogical skill of the future language teacher: "It is advisable to start the study of each paragraph with an introductory exercise, in which you need to investigate a certain linguistic phenomenon and independently draw a conclusion. Then you should carefully read the rule, try to understand it, retell it. After that, you can move on to training exercises, which will not only contribute to mastering the topic, but also tell a lot about human relationships, folk traditions, and the surrounding world" [16, p. 3].

Bachelor of secondary education with specialization "Secondary education. Ukrainian language and literature. World literature" must know the peculiarities of studying each topic in the school course of the Ukrainian language. At the same time, the simulation of professional situations will be effective for the professional growth of the future teacher, which will allow not only to actualize the acquired theoretical knowledge, but also to improve the ability to project this knowledge to a specific speech situation, take into account the communicative purpose and style of communication, age characteristics of students, etc. It is important to give the student the opportunity to try himself as a teacher even before teaching practice at school, for example, when studying a complex sentence, simulate different situations by trying to answer the question "How would you present the initial material about a sentence that has several grammatical bases to 5th-year students?" or "Imagine that your classmates are 9th graders. Give them learning material about types of complex sentences in the lesson of learning new material, etc."

We offer a set of linguistic and communicative exercises and tasks, designed to form and improve the subject competence of future language teachers during the study of the syntax of the Ukrainian language, in particular, the content module "Complex syntactic constructions". Different types of training exercises were developed on the basis of language material extracted from poetic and prose works of Volyn authors, journalistic materials of local media.

The following linguistic and communicative exercises and tasks will help to deepen practical skills and abilities on the topic "Complex Sentences":

- Define the semantic types of relative conjunctions. What semantic and syntactic relations do they express and what units do they combine? Explain the punctuation. 1. *Уже розвіяв вітер попеллице, та я чекання її досі не втямую* (The wind has already blown away the ashes, but I still can't get tired of waiting) (V. Shtynko). 2. *Та це її мені чомусь болять слова, і цей нестерпний біль за серце тисне* (But for some reason the words hurt me too, and this unbearable pain presses on my heart) (V. Shtynko). 3. *Помалу круговорот речей зменшив свою шкідливу для очей швидкість, але відчуття хисткості устрою і відсутності меж не зникло* (Little by little, the rotation of things reduced its eye-harming speed, but the feeling of the shakiness of the order and the lack of boundaries did not disappear) (M. Moklytsia). 4. *Чи то на землю зараз грім впаде, чи, може, сам він стане ураганом?* (Will the thunder fall on the ground now, or will it become a hurricane itself?) (N. Humeniuk). 5. *Ще тільки мить – і небо загурмить* (Just a moment and the sky will thunder) (N. Humeniuk). 6. *І тиєї самої миті двері несподівано розчахнулися і на порозі стала господиня* (And at the same moment the door suddenly opened and the hostess stood on the threshold) (N. Humeniuk). 7. *Стіну китайську із космосу побачив, сприйнявши знаком діянь людських, однак по людству ворон криче* (I saw the Great Wall of China from space, taking it as a sign of human actions, but crows crow about humanity) (V. Verbych). 8. *І трави неторкані дивляться прямо у вічі, і дихають тепло озими у синіх снігах* (And the untouched grasses look straight in the eyes, and breathe the warmth of winter in the blue snows) (V. Hey). 9. *Мені і дереву стівали пташці, і небо послало звіддала то хвилі голубі, то блискавиці* (The birds sang to me and the tree, and the sky sent from there sometimes blue waves, sometimes lightning) (N. Horyk). 10. *На його плечі навалилася величезна брила, і Панас захитався. Ось-ось він упаде, або на його бідлашину голову обвалиться стеля* (A huge block fell on his shoulders and Panas staggered. He is about to fall or the ceiling will collapse on his poor head) (V. Lys).
- From an arbitrarily chosen work of your favorite author, write complex sentences with different means of connecting predicative parts. Trace the frequency of use of single, repeated, and paired conjunctions (see Figure 1).

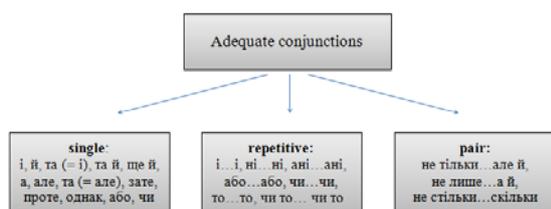


Figure 1. Conjunctions

- Use the proposed nominal sentences as a basis for a coherent text, in which all sentences will be compound. *Присмні враження. Весняний вечір (ранок або день). Затишна атмосфера. Мій настрій. Спогади на все життя* (Pleasant impressions. Spring evening (morning or afternoon). Cozy atmosphere. My mood. Memories for a lifetime).
- Read the text. Indicate which of the sentences are compound. Pay attention to the means of connecting the predicative parts of such constructions. Explain the use of punctuation marks. Imagine yourself in a forest clearing among lilies of the valley. Describe your mood, convey emotions using complex sentences. *Щодня приносить пучечок якихось весняних квітів – пролісків, крокусів,*

анемон. Каже, що понад усі квіти на землі найбільше любить весняні. Вони такі непоказні, не крикливі, але саме в них криється дивовижна сила та воля до життя. Учора приніс букетик конвалій. Сьогодні квіти повністю розкрилися й аромат їхніх крихітних дзвіночків оповів увесь дім. Варто заплющити очі – й ніби опиняєшся на лісовій галявині із заростями цієї білої пахучості (Every day he brings a bunch of some spring flowers - snowdrops, crocuses, anemones. He says that he loves spring flowers more than all the flowers on earth. They are so inconspicuous, not loud, but namely in them an amazing strength and will to live is hidden. Yesterday he brought a bouquet of lilies of the valley. Today the flowers have fully opened and the fragrance of their tiny bells has enveloped the whole house. It is worth closing your eyes - and it is as if you find yourself in a forest clearing with thickets of this white fragrance) (N. Humeniuk).

Deepening of language and communication skills on the topic "Complex sentence" will be contributed by the following tasks:

- Among the proposed complex sentences, find complex subordinate constructions, name their differential features. Specify the means of connecting the predicative parts of complex subordinate sentences. Specify complex subordinate sentences, the parts of which are connected by a) conjunction; b) connecting word. 1. *Зелений коник грає на сурмі, а небо в сині дзвоники стікає* (A green grasshopper plays the trumpet, and the sky flows in blue bells) (N. Humeniuk). 2. *А хіба пташка завжди тільки в небі літає? Часом вона й на землю опускається, щоб крила перепочила* (Does a bird always fly only in the sky? Sometimes she also descends to the ground to rest her wings) (N. Humeniuk). 3. *А ластівоньці час вирушати аж за море синє, бо вже ходять посланці осінні й рукавиці носять про запас* (And for swallows, it's time to go all the way to the blue sea, because autumn's messengers are already on their way, and they carry mittens in reserve) (N. Humeniuk). 4. *За вікном протяжно завивав осінній вітер, десь на узліссі озивалася сова* (Outside the window, the autumn wind howled for a long time; somewhere on the edge of the forest, an owl called) (N. Humeniuk). 5. *Цей дощ... Свинцевими нитками вперто зшиває докупи твоє і моє безсоння у величезну сіру плахту самотності, якою кожен із нас намагається відгородитися від себе* (This rain... With lead threads, it stubbornly sews together your and my insomnia into a huge gray sheet of loneliness, with which each of us tries to isolate from ourselves) (V. Shtynko). 6. *По селах наших у чужій неволі, щоб не ридав між бань святих подзвін, колись ми зводили у Дикім полі не просто вежі, а сторожові* (In our villages in the alien captivity, so that the bell does not sob between the baths of the saints, once we erected not just towers in the Wild Field, but watch towers) (Y. Strutsyuk). 7. *Опівночі вітер стулив повіки на хвилику, а білий чаклун мороз скував обручами озеро* (At midnight, the wind closed its eyelids for a moment, and the white sorcerer frost chained the lake with hoops) (V. Hey). 8. *Потім цар найславетніший думав: наймогутніші мудрість і сила – в красі* (Then the most glorious king thought: the most powerful wisdom and power are in beauty) (V. Verbych). 9. *Магнітофонні стрічки в кронах лип вишпнтують весні таїни вітру, що хмари в піднебесі розстелив, сховавши сонця золоту клепсидру* (Tapes in the crowns of lindens whisper the spring secrets of the wind that spread the clouds in the sky, hiding the golden clepsydra from the sun) (V. Verbych). 10. *Відколи Іван повернувся з війни, Мокрина старалася не ходити мимо їхньої оселі* (Ever since Ivan returned from the war, Mokryna tried not to go past their home) (V. Lys). 11. *Не тямлячись од хвилювання, од передчуття чогось невимовно цасливого, дивного, що мало статися цього неповторного весняного ранку, він підвівся з ліжка* (Being extremely excited, by a premonition of something

- incredibly happy, strange that was about to happen on this unique spring morning, he got out of bed) (V. Lys). 12. *Над їхніми головами шумів ліс, десь у вітці ледь чутио цебетали пташки* (Above their heads, the forest rustled, somewhere in the forest, birds chirped faintly) (V. Lys).
2. Match the complex subordinate sentence with its scheme. Specify which schemes are redundant. Justify your choice.

Table 1: Material for the task of establishing the correspondence between a complex sentence and its graphic diagram.

1. <i>Музика назавжди лишилася таємничим мистецтвом, яке чарує і трохи лякає своєю незбагненністю</i> (Music has forever remained a mysterious art that fascinates and a little scares with its incomprehensibility) (M. Moklytsia).	[Хто...], (той...). [, (шо...),]. (Хто...), [той...]. [], (шо...). [], (яке...). [], (шо ()). [], (шоб ()). [], бо ()).
2. <i>Хто ж рідного одрікся слова, той готує нам новий Чернобыль</i> (Whoever renounced his native word is preparing a new Chernobyl for us) (Y. Strutsyuk).	[Who...], (that...). [, (what...),]. (Who...), [that...].
3. <i>На піщаній лісовій дорозі, що в'юнилася між височеними столітніми соснами, прищорили коней</i> (Horses were spurred on a sandy forest road winding between tall hundred-year-old pines) (N. Humeniuk).	[], (what...). [], in order to (),] [], (which...).
4. <i>Душа ніби затерпла, надійно відгородилася від світу звуконепропущною стіною, щоб ніхто не бачив та не чує, і тихо скімлила</i> (The soul seemed to be numb, it reliably shut itself off from the world with a sound-proof wall, so that no one could see or hear, and quietly whimpered) (N. Humeniuk).	[], what (). [], in order to (). [], because ().
5. <i>Підпливаси до берега, а вітти не можеш, бо хвилі човна назад забрати хочуть</i> (You swim to the shore, but you cannot get out, because the waves want to take the boat back) (N. Humeniuk).	
6. <i>Раптом він почув притишені голоси, тихий дівочий сміх, що розсипався легенькими дзвіночками-горошинками</i> (Suddenly he heard hushed voices, a soft girlish laugh scattered with light bells-peas) (V. Lys).	

3. Read the text. Complete each sentence with a predicative part, forming complex subordinate constructions. Suggest a title. Provide graphic diagrams of the formed complex structures. *Добігав кінця перший календарний місяць зими. Піщаний пугівець між хутором і селом, уже більше схожий на стежку, ніж на польову дорогу, продовжував усмоктувати в себе холодні грудневі дощі. Подекуди на суглинкових ґрунтах утворилися зеленувато-жовті калабани. Вітер, притомившись, із розгону падав на них, зморщив застоялу поверхню у дрібні брижі й закидав її рудим листям, підхопленим у лісі* (The first calendar month of winter was coming to an end. The sandy path between the farm and the village, already more like a path than a country road, continued to soak up the cold December rains. In some places, greenish-yellow puddles have formed on loamy soils. The wind, tired, fell on them with a rush, wrinkled the stagnant

surface into small ripples and threw it with red leaves picked up in the forest) (N. Humeniuk).

4. Describe your favorite season in six complex sentences with a conjunction between the parts. Take the poetic lines of M. Moklytsia as the basis of your own text. Complete each line (potential part of a complex sentence) with another predicative part. Specify the means of connecting the parts of the formed complex sentences. Comment on the punctuation.

Seasons: *decadence / renaissance*

<i>Зима</i>	<i>Весна</i>	<i>Літо</i>	<i>Осінь</i>
<i>Сніг і сльота</i>	<i>Купи зимового сміття</i>	<i>Душно</i>	<i>Мертве поле</i>
<i>Слизота</i>	<i>На звалищі</i>	<i>Пилога в усі боки</i>	<i>Мертвіючий ліс</i>
<i>Холодом наскрізь</i>	<i>Груша цвіте</i>	<i>Мухи балують</i>	<i>Ні сонця ні дня</i>
<i>Сніг і хурделиця</i>	<i>Воскреслі води</i>	<i>Спека в холодку</i>	<i>Парад кольорів</i>
<i>Вогонь у печі</i>	<i>Птах зам вікном</i>	<i>Звади ягоди</i>	<i>Гарбузова господа</i>
<i>Затишок дому</i>	<i>У кожній щільні – травинка</i>	<i>Фруктово-ягідний сад</i>	<i>Тонкий аромат проміння</i>

The following exercises and tasks will help to deepen the skills and abilities to analyze unaccompanied complex sentences according to syntactic structure, semantics and intonation, to use such constructions normatively and expedient:

1. Read the sentences, describe them according to their structure. Define sentences with parts of the same type and different types. Pay attention to punctuation. Comment out the punctuation marks. 1. *По барабаних перетинках б'ють барабани світу, тривожно гуде новинами діапазонний тамтам* (The drums of the world beat on the eardrums, a wide-range tom-tam hums alarmingly with news) (V. Prostopchuk). 2. *Знаю: дощ веде тебе у спомин* (I know: the rain brings you to memory) (V. Shtynko). 3. *Відніми сні – життя змліє на очах* (Take away dreams - life will fade before your eyes) (M. Moklytsia). 4. *Було прикро дивитися на ті безтямно зірвані лілії: красуні не витримували поза своїм водним царством і кілька хвилин, одразу марніли, закривали пелюстки і вертались назад у бутон* (It was a pity to look at those blindly plucked lilies: the beauties did not last even a few minutes outside their watery kingdom, immediately wasted away, closed the petals and returned to the bud) (M. Moklytsia). 5. *Над Стоходом уже Полісся. Спочивають спрацьовані кросна розбазарює лірику місяць ситим совам і сивим соснам. Шелестить осока глибока поміж вусами у сомів шелестить листопад у кроках* (Polissya is already above Stokhod. The working loom rests, the moon squanders its lyrics to well-fed owls and gray pines. The deep sedge rustles, between the whiskers of the catfish, leaves fall rustles in the steps) (Y. Strutsyuk). 6. *Та й не хотіла теревенити з балакучим сусідом. Над їде зненацька Петро – біда буде* (She didn't want to chat with the talkative neighbor. Peter will come unexpectedly - there will be trouble) (N. Humenyuk). 7. *Вадим не заперечував, але залишався при своїй думці: його вже не вилікує ніщо й ніколи* (Vadym did not object, but he stuck to his opinion: nothing will ever cure him) (N. Humenyuk). 8. *Небо для всіх відчинене, зачинені*

наглухо ми (The sky is open for everyone, but we are tightly closed) (N. Humenyuk).

2. Work out the table "The nature of relations between the parts of a non-conjunctive sentence. Punctuation". Complete the task (see Table 2).

Table 2: The nature of the relationship between the parts of a non-conjunctive sentence. Punctuation.

	The nature of the relationship between the parts of a non-conjunctive sentence	Punctuation	Examples
1	Enumerable with simultaneity or sequence of events	[], [] or []; []	Синьо тишу цвіркун лоскоче, синя тиша цвірчить в мені (The cricket tickles the blue silence, the blue silence chirps in me) (Y. Strutsyuk)
2	Explanatory	[]: [explanation]	Одна-єдина нота порушує гармонію скорботи: зі щибетом на весь світ іпаки лаітують кубельце у дулі старого горіха (A single note breaks the harmony of grief: with chirping to the whole world, starlings arrange a cube in the hollow of an old walnut) (M. Moklytsia)
3	Investigative and objective	[]: [addition, clarification]	Знаю: правда все частіше вбиває (I know: the truth kills increasingly more often) (V. Verbych)
4	Causal	[]: [cause]	Не садіть берези: точачи весною її кров, уб'ють. Не садіть ялини: зимою для новорічної втіхи виконає вирок сокира... (Don't plant birch trees: they will kill her by shedding her blood in the spring. Do not plant fir trees: in winter, for New Year's cheer, the ax will carry out the sentence...) (V. Verbych)
5	Consequential	[]– [consequence]	Відніми сні – життя зміліє на очах (Take away dreams - life will fade before your eyes) (M. Moklytsia)
6	Conditions or time	[condition] – [] [time] – []	Птах сховався – буде хуртовина (The bird hid - there will be a blizzard) (V. Prostopchuk)
7	Comparative-opposite	[] – []	Вмерло нас в снігах чимало – Україна же не умерла (Many of us died in the snow - Ukraine did not die)

			(Y. Strutsyuk)
8	Comparative	[]– [comparison]	Говорить – шовком вишиває (Speaks as if embroiders with silk) (folklore)

3. Read the sentences below carefully, put punctuation marks. Fill in the Table 3. Among the proposed sentences, there are redundant. Find them. Justify your choice.

Table 3: Punctuation marks.

Rule No.	1	2	3	4	5	6	7	8
Sentence								

1. І лиш оце вдалося зрозуміти любов одна бува (And that's all I managed to understand - there was only one love) (V. Shtynko). 2. Журиться гірко горіх біля хати промінь останній гасне на склі (The nut gnaws bitterly near the house, the last ray is extinguished on the glass) (V. Shtynko). 3. У цьому світі логіка залізна смерть настає коли втихають боли! (In this world, logic is iron - death comes when the pain subsides!) (V. Shtynko). 4. З'являвся ритм зникло вільне дихання (A rhythm appeared and free breathing disappeared) (M. Moklytsia). 5. Я думаю тепер процес пізнання це мандри угліб свого власного нутра а не вештання по світу між людей та книг (I think now the process of knowledge is a journey deep into one's own heart, and not a wandering around the world between people and books) (M. Moklytsia). 6. Не треба сьогодні мені утіх у правду брехня вдиктована (Today I don't need comfort in the truth, lies are dictated) (Y. Strutsyuk). 7. Синьо тишу цвіркун лоскоче синя тиша цвірчить в мені (The cricket tickles the blue silence, the blue silence chirps in me) (Y. Strutsyuk). 8. Тільки-но заплющили очі вітром я погід вікном обізвався серед ночі (As soon as you close your eyes with the wind, I will call under the window in the middle of the night) (Y. Strutsyuk). 9. Летіли юні мрії висотою тепер думки шукають глибини (Young dreams flew high, now thoughts seek depth) (V. Hey). 10. Не встигло літо квітів долюбити зміцнити юні крила журавлині на тлі блакиті тепло засвітились городів акварелі золотисті (The summer of flowers did not have time to finish and strengthen the young wings of the crane, as golden watercolors of the gardens lit up against the blue background) (V. Hey). 11. Гляне холодною водою обіллє (Will look - like pouring with cold water) (folk art). 12. Тополині шпигли у'ялися в багряне сонце по крайнебу кров розлилася (Poplar spiers stared into the crimson sun, blood spilled over the edge of the sky) (V. Prostopchuk).

4. From the works of Yevhen Sverstyuk, write 10 different types of elementary complex connective sentences. Reconstruct these constructions in the unconjugated. Comment on the semantic relations between the parts of the formed complex sentences; provide graphic diagrams. Justify the punctuation marks.
5. Complete each of the given simple sentences with a predicative part, forming various elementary constructions without conjunctions; find out the semantic types of the formed sentences; analyze the punctuation.

A correctional and developmental center for children with physical disabilities will appear in Lutsk. In early and preschool age, timely help from specialists will in some cases prevent children from becoming disabled. In order to start the activity of the cell, the Lutsk City Council is deciding on the issue of providing premises (Volyn News).

We offer the following linguistic and communicative exercises and tasks for the topic "Multicomponent complex sentence":

1. Read the proposed complex sentences, analyze the semantic relations between the predicative parts, indicate

the means of connecting the predicative parts. Identify the types of sentences with several subordinate clauses, give schemes of these sentences. Comment on the punctuation.

1. *Набрякла дощами осінь, посмуговане небо хльостало, напиналась вітрами просинь і до обрію липла грузького* (Autumn swollen with rain, the shabby sky whipped, the winds kicked the blue and stuck to the grue horizon) (V. Prostopchuk).
2. *Все. Спектакль закінчено. Маестро-бузок втомлено поклав на мокре підвіконня мокру диригентську паличку, на самісінькому кінчику якої брунька затисла у зеленому кулачку фіолетову нотку, щоб вона дисонансом не прозвучала цієї ночі* (The end. The performance is over. The maestro-lilac tiredly placed a wet conductor's baton on the wet windowsill, on the very tip of which the bud held a violet note in a green fist, so that it would not sound dissonantly that night) (V. Shtynko).
3. *Лілія, цей поліський лотос, – саме та квітка, яка найбільше підходить для символізації краси, що твориться на межі між вічним і тимчасовим* (Lily, this Polissia lotus, is exactly the flower that is most suitable for symbolizing the beauty that is created on the border between the eternal and the temporary) (M. Moklytsia).
4. *Пригоди – це єдине, чого ми шукали і що нам було цедро дароване* (Adventures are the only thing that we were looking for and that was generously given to us) (M. Moklytsia).
5. *Садовий цвіркун методично скрипить, що день закінчився, що сонце сідає і що сад заходить у вечір* (The garden cricket methodically squeaks that the day is over, that the sun is setting and that the garden is entering the evening) (M. Moklytsia).
6. *Топчуться по ранах чорнобильські дощі, перецвіла калина, гриби гниють на пні, іржависто-солоний на землю падає сніг* (Chernobyl rains trample on wounds, viburnum has overbloomed, mushrooms rot on stumps, rusty-salty snow falls on the ground) (Y. Strutsyuk).
7. *Їй здавалося, що вони вдовх з Лукою опинилися в дерев'яній капсулі часу, яка тільки на мить зупинилася між лісом і селом, між землею і небом, між минулим і прийдешнім* (It seemed to her that she and Luka were in a wooden time capsule, which stopped only for a moment between the forest and the village, between the earth and the sky, between the past and the future) (N. Humeniuk).
8. *Зупинившись біля закам'янілого гриндя княжого, що втомлено зіперся на мохом укритий меч, слухаю травневу солов'їну сагу і вбираю у себе сонце, що всміхається з діамантів на пелюстках розбитого серця* (Stopping at the petrified chest of the prince, resting his sword wearily on the moss-covered sword, I listen to the May nightingale saga and absorb the sun that smiles from diamonds on the petals of a broken heart) (Y. Strutsyuk).
9. *Як переконати істориків тих, що за шаблі взяли русини не з добра вельми великого, що воля людні може бути дорожча безпечного спокою?* (How to convince the historians that the Ruthenians did not take up the saber for the good of the great, that the liberty of a person can be more valuable than safe peace?) (I. Korsak).
10. *Існує теорія, що помах крил метелика, який випадково десь там, у джунглях на Амазонці, зачепив павутинку чи краплю роси, може зруйнувати цілий ланцюжок зв'язків і створити нову ситуацію, яка через енну кількість нібито випадковостей спричинить ураган на тихоокеанському чи атлантичному узбережжі США* (There is a theory that the flutter of a butterfly's wings, which accidentally caught a web or a drop of dew somewhere in the Amazon jungle, can destroy a whole chain of connections and create a new situation that, due to an infinite number of supposed accidents, will cause a hurricane in the Pacific or Atlantic coast of the USA) (V. Lys).
11. *Його покірність, яка в дивний спосіб поосудувалася з непоказною, але затятою гідністю, розважливості й уміння швидко приймати рішення, коли тривога заглядала у вічі, принесли повагу серед товаришів по службі* (His humility, which in a strange way was combined with an inconspicuous but ardent dignity,

prudence and the ability to quickly make decisions when anxiety peeked into his eyes, earned him respect among his colleagues) (V. Lys).

12. *Враз йому здалося, що він чує шурхіт крил і на простягнуту руку сідає маленька пташка* (Suddenly it seemed to him that he heard the rustle of wings and a small bird sat on his outstretched hand) (V. Lys).

2. Analyze the proposed journalistic material in terms of sentence types. Complete the following tasks:
 1. Name multi-component complex structures. Find out how many predicative parts they have and what types of syntactic connections there are between them. Comment on the punctuation.
 2. Name complex sentences with two predicative parts. Specify the means of connection of predicative parts. Comment on the punctuation.
 3. Name the simple sentences. Complete each of them with three predicative parts, forming complex multi-component sentences with different types of connection. Characterize the structures formed. Comment on the punctuation.

Preparations for the New Year and Christmas holidays usually began every year in December. The war in the country changed everything. Adults are not in a festive mood at all. This year's Christmas trees will most likely not shine with lights, but children are asking their parents to buy at least a small tree for the holiday. Traditionally, Volyn foresters prepared New Year's beauties for sale. From now on, one can also buy them online. Foresters say that in recent years, New Year's trees are increasingly being bought in pots to later be planted in the ground.

Coniferous trees are constantly planted in the forest farms of the region, so that the green beauties create a New Year's mood for children during the Christmas holidays.

In total, in 2022, foresters in Volyn prepared 50,000 conifers for sale. A little over 20,000 have already been sold. Because of the war, many Ukrainians have abandoned the traditional attributes of the holiday, but there are still children who hope for a New Year's miracle and presents under the tree. (Volyn News).

3. Using the proposed simple sentence as the main part, form a complex multi-component sentence with five subordinate parts: *Ловлю слова* (I am catching words) (N. Humeniuk). Name the means of connection of the predicative parts of the formed structure, indicate the type of subordination. Comment on the punctuation. Provide a graphic diagram of the sentence.
4. Offer 5 examples of multi-component complex sentences with matching conjunctions between predicative parts. Comment on the punctuation marks when the conjunctions match in a multi-component complex sentence.

A sample task:

Про свій перший успіх Лідочка похвалилася тільки мамі, а коли з'явилась і друга відмінна оцінка, вона не витримала і ввечері показала зошита її татові (Lidochka bragged about her first success only to her mother, and when the second excellent grade appeared, she could not stand it and showed the notebook to her father in the evening) (V. Lys).

A comma is not placed between conjunctions if the first of them is opposite.

Knowledge of the structural and semantic features of direct speech, methods of replacing direct speech with indirect speech, the principles of introducing quotations, as well as the ability to correctly place punctuation marks in direct and indirect speech, quoting, construct and use direct and indirect speech, etc. will consolidate such exercises and tasks on the topic "Means of transmission of foreign speech":

1. Define the structural and semantic types of the given sentences. Complete the following tasks. Analyze constructions with direct speech. Comment out the punctuation marks. Constructions with indirect speech replace the direct speech so that it stands in postposition

- and preposition in relation to the author's words. Comment on the punctuation. 1. *А я ж молила: «Серце безборонне...». А я ж просила: «Бережись грози!». Ти засміявся: «Бувалець не потоне у крапельці жіночої сльози»* (And I prayed: "The heart is defenseless...". And I asked: "Beware of thunderstorms!". You laughed: "An experienced one will not drown in a drop of a woman's tear") (N. Humenyuk). 2. *Підсудні вже сиділи на своїй лаві оддалік і жестами підтверджували, що звинувачення не безпідставні* (The defendants were already sitting on their bench from a distance and confirmed with gestures that the accusations were not groundless) (M. Moklytsia). 3. *Він знає: віра й істинність ідей були і є рівновеликі* (He knows: faith and the truth of ideas were and are equal) (V. Verbych). 4. *«Слово-неславо, не наздоганяй мене», – просить художник* ("Don't catch up with me, word-non-fame" asks the artist) (V. Verbych). 5. *Переконуєш: «Історія – некрополь». «Не для нас, – кажу. – Ми бранці безімення у братській могилі віків»* (You convince: "History is a necropolis". "Not for us", I say. - We are prisoners of namelessness in the mass grave of the ages") (V. Verbych). 6. *«Моя душа – птах, який живе в мені, – подумала якось Ліда. – Він має гніздо, а може, й виведе там пташенят. Тоді я годуватиму їх словами, віришками й задачками. Я не покажу те гніздо нікому»* ("My soul is a bird that lives in me, - Lida once thought. - It has a nest, and maybe it will raise chicks there. Then I will feed them with words, poems and puzzles. I will not show that nest to anyone") (V. Lys). 7. *Старшина теж ступав, хто та звідки* (The foreman also asked who and where he was from) (V. Lys). 8. *Та хтось спохопився і мовив між тим: «Усі на цім світі під небом святим...»* (But someone woke up and said in the meantime: "Everyone in this world is under the holy sky...") (N. Horyk). 9. *Дивлячись на твоє досконале тіло, думаю, що бути красивим – привілей богів* (Looking at your perfect body, I think that being beautiful is a privilege of the gods) (K. Koretska). 10. *«Добриндень, світлице-колеско!» – до гаю березень мовить* ("Good morning, cradle-light!" - March speaks to the grove) (V. Heyu).
2. Write the text, placing punctuation marks. Identify types of sentences, comment on punctuation. Pay attention to the sentences with direct speech, provide diagrams of such constructions.

Styr renounced the old course.

The St. Mykolaiv monastery that stood on the hill above the floodplain melted in the mist of ages. Grandfather Mykola, holding the hand of his grandson Mykolitsa, says the Church of the Holy Spirit has gone underground. Maybe that's why there is water from a well near the church that was built in the seventeenth century on the site of the new birth of the monastery. And you, servant of God, taste slowly. The water is full of prayers - the priest Kostyantyn quietly advised, he recently tried to breathe life into the cell, which in the thirties and forties of the twentieth century was the residence of Bishop Polikarp, and after the war, there were the classrooms of the local school. Surely, the servant of God asks - affirms the monk, let's cover the roof with reeds, let's drive out how the good Christmas frosts will start on the floodplain. Without waiting for an answer, he continued, Jesus Christ was given a reed before the crucifixion.

Falling in the snow, we go up. We breathe in the transparent Zhydychna sky...

Archaic traces of our footprints are in the snow. An old pear tree is at the foot of the churchyard hill. It will be our nurse - Father Konstantin rejoices, spreading his arms. And again the sun comes out from behind the clouds. And the imperishable melody sounds on the strings of the rays. Glory be to you, Lord, Konstantin is overshadowing with the sign of the cross both himself and all of us and the environment. And the dove that sat

on the shoulder of the oak cross erected in the ninety-second of the last century seems to be repeating after him (V. Verbych).

3. Write a short text (8-10 sentences) according to the proposed beginning, entering sentences with direct speech.

Вона була сьогодні королевою... (She was the queen today...)

Comment out the punctuation marks.

4. Prepare a presentation on the topic "Rules for creating quotations". As a source of factual material, use an arbitrarily selected article from the scientific publications "Volyn Philological: Text and Context", "Linguostylistic Studies".

4 Conclusion

The actualization of the competence approach in the modern educational process activates the search for ways of its implementation, the use of such methods and techniques that will help the student to mobilize the acquired theoretical knowledge in a real life situation for successful self-realization, for the implementation of intellectual, creative, research initiatives.

In the system of competencies important for the future language teacher, we single out syntactic competence as the one that will determine the formation of the specialist's language, speech, and communication abilities. An actual method of achieving a high result is well-chosen different types of language and communication exercises (analytical, reproductive, creative-constructive), which will enable the conscious perception of knowledge, the ability to correctly construct written coherent speech, skillfully use the potential of syntactic units in oral speech. The proposed tasks and exercises, in addition to consolidating the theoretical material in practice, improving the skills and abilities to appropriately use the expressive capabilities of syntactic units in accordance with the linguistic and communicative situation, will also develop the ability to think logically and critically, the ability to see a problem and ways to solve it, the ability to work in a team and interact. The relationship between syntax and punctuation (the importance of the intonation-punctuation aspect when studying the structural-semantic features of sentences, the syntactic principle as one of the basic ones in the punctuation system of the language, etc.) actualizes attention to the peculiarities of the formation of punctuation competence of students, which determines the perspective of further research.

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Primary Paper Section: A

Secondary Paper Section: AI

EXPRESSION OF NEGATION IN MEDIA TEXTS DURING THE RUSSIAN-UKRAINIAN WAR

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Abstract: The article characterizes negation as a generalized linguistic concept of logical-psychological, linguistic-cognitive, and subjective-objective direction. A number of its differential features include the ability to convey negative information about various objects of the environment, situations, actions, processes, states, and properties, usually with an accompanying evaluative and emotional-expressive load. It was found that the media texts of the period of the active phase of the Russian-Ukrainian war present a semantically branched group of linguistic units of different levels, which perform the role of means of explication of negation. It was determined that phraseological and lexical markers mainly represent negation covertly and often acquire a special ironic sound, expressively emphasize the unreasonableness and illogicality of someone's actions, sometimes vulgarize the speech of modern journalism. Emphasis on the word-form realization of the negative content made it possible to distinguish specific (*не-, зне-, без-, ни-*) and borrowed (*аму-, комп-, де-*) (*anti-, counter, de*) prefixes. It was found out that the response of Ukrainians to the challenges of the war was the actualization and production of derivatives with the borrowed service formant *де-* (*de-*), which mainly functions in ironically marked expressions. A detailed description of occasionalisms, which testify to the linguistic creativity of the Ukrainian people and contribute to the expressiveness of what is said, enabled the complexity of the research on the means of expressing negation. It is emphasized that the verbalization of negative semantics is related to the morphological layer of the language, in particular, with particles, prepositions, and conjunctions, which play an important linguistic-stylistic role and serve as a vivid rhetorical means.

Keywords: negation; morpheme; parts of speech; sentence; language of mass media; rhetoric of public communication; Russian-Ukrainian war; Ukrainian language.

1 Introduction

The development of the language, in particular, its lexical system, is largely connected with the changes taking place in various spheres of society's life. Dynamic processes in the vocabulary take place incessantly during different time periods and perhaps most during the period of illegal, unprovoked Russian aggression, which began in February 2022. It is important to note that Ukrainians are not only recapturing territories captured by the enemy, resisting Russian aggression on the battlefield, surviving without light, water and heat, but also demonstrating their indomitability and determination with the help of words. Modern realities have become an important extralinguistic factor that has influenced the activation of certain groups of linguistic units, the expansion of the semantic range of already known lexemes, and the emergence of new nominations, sometimes those that are outside the boundaries of established communicative and ethical norms. The emotional reaction to the unjustified actions of the occupiers served as a prerequisite for the use of updated models of word creation, often with expressive and evaluative coloring. Linguistic units with a generalized negation value belong to the group of lexemes, the functioning of which is related to current objective facts. Being aware of the short-situational activation of some of these nominations, we still consider their comprehensive study to be an urgent issue of linguistics. They constitute an undeniable source value that affects the development of the modern Ukrainian language in general.

Many linguistic works are devoted to the comprehensive description of linguistic units with the generalized meaning of negation. Among the significant volume of scientific sources, M. P. Bagan's research deserves attention – in it, the functional-semantic, ethnolinguistic, phraseological, and other

manifestations of the negation category are characterized in detail [1], the specifics of the means of realizing the negation content in the plane of transformation of precedent phenomena are clarified [2]. T. Chrdileli was interested in negation as a kind of universal that is on the border of logic and linguistics and closely interacts with affirmation [3]. N. M. Kostusyak [8], O. P. Kush [12], and others traced the specificity of the categorical and modal dichotomy of affirmation – denial. Analyzing the qualifying signs of negation in general and focusing on the means of its expression, scientists often choose works of various genres, which makes it possible not only to determine the functional, grammatical, communicative-pragmatic, and other parameters of these linguistic units, but also to consider them in the plane of the writer's idiosyncrasy [7; 9]. Somewhat less often, the source basis of scientific works devoted to the problem in question is formed by media sources. In particular, G. A. Kryshchalyuk described objections in functional and linguistic-cognitive dimensions, building her research on the material of modern American newspaper discourse [11]. The Ukrainian media information field, in particular, during the period of the Russian-Ukrainian war, was also repeatedly chosen by linguists as a corpus of actual material, but it was used to solve other linguistic problems [10; 14; 19]. The use of modern newspaper journalism will make it possible not only to deepen information about the functional and communicative-pragmatic specialization of negation, but also to consider it in terms of dynamics, integration, and multi-vectority of paradigms, stylistic originality, symbiosis of various verbal means. All this determines the relevance of the raised problem.

The purpose and task of the research is to comprehensively analyze the primary and secondary means of expressing negation, evidenced in the media information field during the active phase of the Russian-Ukrainian war, to characterize the semantic nuances of the specified units, to consider them in the context of the multi-level organization of language and language dynamics, to emphasize the rhetorical peculiarity of public communication, which contains formal indicators of denied (negated) content.

2 Materials and Methods

The choice of linguistic analysis methods is determined by the purpose of the work and the nature of the tasks solved in it. The research uses a complex methodology: the field method; conceptual and contextual analysis; method of interpretation and linguistic modeling; continuous sampling method; general scientific methods (comparison and generalization; analysis and synthesis).

The theoretical and methodological basis of the study was constituted of the postulates of anthropocentric linguistics, the fundamental factor of which is the "man in the language", as well as the principles of cognitive and functional linguistics.

3 Results and Discussion

The productivity of the study of any linguistic phenomena, categories, generalized categorical meanings, etc. provides a clear outline of their specificity, set of differential features, means of expression, etc. In view of this, we consider it necessary to define the semantic scope of the concepts of negation and denial. In the twenty-volume "Dictionary of the Ukrainian Language", negation is interpreted as "denial, non-recognition of something, negative attitude towards something" [5, p. 187]. In the fifth volume of the earlier edition of this lexicographic work, it is stated that negation is "1. Action by meaning to deny. ... 2. Statement of disagreement with someone, something, evidence against something. ... 3. Non-recognition of the existence, significance, expediency of something. ... 4. *In philosophy*: Destruction, overcoming, replacement of the old with the new, the previous with the next in the process of progressive development. ... 5. *In linguistics*: Conveying with the help of various linguistic means the fact that the connection

between the elements of the expression is imagined as such that it does not really exist or is completely absent" [4, p. 405–406]. A comparison of dictionary articles allows stating that although the concept of negation is not endowed with the status of a linguistic term and shows a lexical closeness with the concept of denial, it semantically more accurately reflects the essence of what will be discussed further in the article. In our opinion, both lexemes as synonymous counterparts can be used in emotionally neutral contexts, which is a verbalization of the "thought-speech operation by which speakers learn and interpret the world, structure experiential knowledge" [1, p. 10–11]. The focus on the specified qualification parameters enabled M. P. Bagan to include objections (denials) in the group of modus, cognitive, and at the same time communicatively oriented categories [1, p. 11]. We consider the concept of negation to be somewhat broader than denial, since the purpose of the means of its expression is not only to transmit negative information about various objects of the environment, situations, actions, processes, states, properties, etc., but also in the ability to influence the sensory sphere of the addressee, to serve as a vivid rhetorical and negative assessment tool. All this indicates the importance of the study of language units with the accompanying meaning of negation in view of the anthropocentric, cognitive, communicative-pragmatic, functional, and other priority areas of modern linguistics. Adherence to these canons prompts consideration of negation speech situations in the "speaker-addressee" plane. In the process of communication, the speaker seeks to influence his opponent, to convince him of something, to point out the absence of some objects, phenomena, etc., their inconsistency with some model, his own ideas, to express refusal, disagreement, refutation, prohibition, and at the same time to demonstrate a negative communicative reaction to what was said. The specified parameters make it possible to qualify negation as a category of logical-psychological and linguistic-cognitive direction with a predominance of subjective features. The predominance of the subjective factor is proved by the fact that the thought of refutation, denial of something, first of all, exists in the mind of a person, and then is reflected in language. However, one cannot ignore the existence of an inseparable relationship between subjectivity and objective information presented through the prism of the speaker's perception, which often depend neither on the situation of speech communication, nor on its participants. All this makes it possible to draw a conclusion about the subjective-objective nature of negation.

One of the aspects of the research of the analyzed linguistic phenomenon is the focus on the unity of content and form. In this case, it is important to emphasize not only the communicative-pragmatic parameters and the multifaceted semantic specialization of the linguistic phenomenon under consideration, but also to point out the primary and secondary means of its linguistic expression. Describing the formal interpretation of negation, scholars express different considerations. In particular, O. O. Selivanova includes prefixes, negative particles, predicates, verbs, negative affixes of verbs, analytical forms and syntactic constructions, intonation and word order, negative sentences (with general or partial negation depending on the position of the negative particle) as formal representatives of negative content [18, p. 173–174]. M. P. Bagan expressed an interesting opinion on the raised issue. Discussing the expediency of distinguishing explicit and implicit types of negation, the researcher claims: "It is worth abandoning the term "implicit means" because they have both a form of expression and a negation function. In our opinion, the functional specificity of grammatical constructions, which under certain contextual conditions lose their primary function and fall into the area of negation expression, is more accurately conveyed by the term "non-specialized" or "secondary means of negation expression". The use of specialized means is born from the desire of the speaker to quickly and clearly convey the meaning to the receiver, while communication using secondary means is primarily related to the realization of certain communicative intentions of the speaker – to effectively influence the interlocutor, unobtrusively adjust his vision of the situation, involve in the joint development of thought" [1, p. 63].

According to Bagan's observations, secondary means of expressing negative content implement indirect negation, the accompanying component of which is expressiveness, the presence of certain modus shades [1, p. 64–65]. Fully agreeing with the researcher's concept of the presence of primary and secondary means of marking the objected content, we add that both varieties not only play an important role in expressing certain non-verbal situations, but also express the speech behavior of interlocutors who, in order to realize their intentions, primarily with the aim of convincing listener in something, try to choose the most appropriate language means. In linguistics, this aspect of study is currently relevant and is aimed at revealing the pragmatic instructions of the addressee and analyzing the communicative-intentional content of units that differ in terms of structural parameters.

The formal implementation of negative content in the media space of the period of the Russian-Ukrainian war is connected with linguistic units that show a relationship to the phraseological, lexical, word-forming, morphological, and syntactic levels. In the analyzed source base, phraseological units are a quantitatively limited group. In view of the concept widespread in linguistics, according to which it is appropriate to distinguish between explicit and implicit expressions of negative content, we note that stable expressions are usually included in the sphere of implicit ones, giving them the status of functionally limited, and, therefore, peripheral. We find such reasoning in the studies of many scientists, in particular, in the article "Objection, negation, negator (typological study on the material of German, Ukrainian and other languages)" by A. Y. Paslavskva [15, p. 122]. However, the selected corpus of formal negation representatives testifies that phraseological units form two varieties: with a materially expressed negation representative and without it, cf. *Ззначається, що перемовини не зрушили безпекову ситуацію з міся, домовитись про припинення возню не вдалося (It is noted that the negotiations did not change the security situation, it was not possible to agree on a ceasefire)* (<https://yur-gazeta.com>, March 10, 2022) and *Тому всі ці потуги освятити окупацію – путінської рябї кобили сон (Therefore, all these attempts to sanctify the occupation are the dream of Putin's spotted mare)* (<https://volga.lutsk.ua>, October 2, 2022). In the "Phraseological Dictionary of the Ukrainian Language", the persistent expression *the dream of a spotted mare* is interpreted as "нісенітниця, безглуздя, дурниця" (nonsense, gibberish, absurdity) [17]. In the given sentence, it acquires a special ironic sound thanks to the addition of the subordinate adjective *путінської (Putin's)*. In new speech situations, the analyzed phrase expressively emphasizes the unreasonableness and illogicality of the actions of the head of the Russian Federation. It is important to emphasize that if the formal indicator of negation is present in the structure of the phraseology, it is also present in the explanation, cf.: *Юлія запевнила, що її син був строковиком. А вони поїхали нібито на навчання. «Пройшов місяць, не було ні слуху ні духу... Потім з'ясувалося, що вони були в Україні і захоплювали цей острів», – знову розповідає Юлія (Yulia assured that her son was a soldier. And they allegedly went to study. "A month passed, there was no hearing or spirit... Then it turned out that they were in Ukraine and were capturing this island," – Yulia tells again)* (<https://www.bbc.com>, April 18, 2022) and "*(ані) ні слуху, (ані) ні духу*" ("neither hearing nor spirit") – not a word about anyone, from anyone, and without adjunct. Nothing is known about anyone, anything" [17]; *Напрямок атаки вони заставляють бронетранспортерами, танками та потягами одночасно в такий спосіб, що ні пройти, ні проїхати (They fill the direction of attack with armored personnel carriers, tanks and trains at the same time in such a way that one cannot go and cannot drive)* (<https://nasze-slowo.pl>, April 25, 2022) and "*ні (ані) пройти ні (ані) проїхати*". 1. It is impossible to get anywhere (trans. due to the congestion of the dirt road in the rain)... 2. About a large number of someone, something" [17]. Sometimes we come across expressions that vulgarize the speech of modern media journalism, for example: *У серці тепло й запал віри. Дідька лисого вам, а не Бахмут (There is warmth and fire of faith in the heart. Like hell to you, not Bakhmut)* (<https://gazeta.ua>, September 1, 2022). Cf.:

“Лідька лісого, rude”. 1. It is used to completely negate something; for nothing, never... 2. Nothing; absolutely nothing” [17]. Although such phraseological units weaken the ethical and aesthetic norms of public communication, they contribute to the “revival” of the text, bringing it closer to the reader and reflect the position of the entire Ukrainian people, seeing it not possible to tolerantly describe all the atrocities of the occupying forces in Ukraine.

In the context of explicitness/implicitness, the lexical means of expressing negation need consideration. Guided by the fact that lexical units do not have clear negative signs, L. V. Kardash [6, p. 10], A. Y. Paslavskva [16, p. 45], and others call them implicit ones. According to T. Chrdileli, “implicit negation is the most complex type of negative construction. Its use makes it difficult for the recipient to understand the statement. The use of implicit negation is determined primarily by the formal situation of communication. The frequency of use of this objection is much lower than the use of other types” [3, p. 71]. According to M. P. Bagan's observations, “lexical units directly convey a negative meaning. The speaker does not derive it mentally as implicit information, but correlates certain lexemes with a specific negative meaning” [1, p. 126]. Such an argument seems to us to be quite motivated. In addition, it is confirmed by explanations of lexemes with negative semantics provided in explanatory dictionaries, for example: *байдужий* (*indifferent*) – “який не звертає уваги на кого-, що-небудь, не виявляє зацікавлення. // Який виражає незацікавленість, безсторонність. // Який не виявляє співчуття; нечутливий, нечуйний. // in the meaning of the noun *байдужий* (*indifferent*) (the one who does not pay attention to someone, something, does not show interest. // The one who expresses disinterest, impartiality. // Who does not show compassion; insensitive. // in the meaning of the noun “*indifferent*”... About an insensitive person who is not interested in anything, does not care) 2. кому (to whom). Який не викликає до себе інтересу, не цікавий, не важливий для кого-небудь...” [13, с. 56]; *відсутній* – “який не перебуває в даному місці в певний час; прот. присутній... 2. Якого немає, який не існує” [13, с. 182] (Which does not arouse interest, is not interesting, is not important for anyone...” [13, p. 56]; *зайвий* (*redundant*) – “1. Який не використовується в цей момент; вільний (в 11 знач.). // Нічим не заповнений (про час). // Надмірний. // у знач. ім. зайве... Те, що становить лишок. 2. Ще один до якоїсь кількості; додатковий. 3. Без якого можна обійтись. // Даремний, непотрібний. // Присутність якого не бажана. // у знач. ім. зайве... Те, що непотрібне” [13, p. 393] (“1. Which is not in use at the moment; free (in 11 meanings). // Not filled with anything (about time). // Excessive. // in the meaning of the noun “*excess*”... That which constitutes an excess. 2. One more to some number; additional. 3. Which you can do without. // Useless, unnecessary. // The presence of which is not desired. // in meaning of “*redundant*”... That which is unnecessary” [13, p. 393]; *забороняти* (*prohibit*) – 1. Не дозволяти робити, здійснювати що-небудь. // Не допускати, не дозволяти користуватися чим-небудь, уживати щось, відбуватися, існувати чому-небудь” [13, p. 376], *утрачати* (*втрачати*) – «залишатися без когось, чогось (унаслідок різних причин). // Губити кого-, що-небудь. 2. Залишатися без кого-небудь унаслідок його смерті, загибелі. // Залишатися без кого-, чого-небудь під час бою, війни. // Залишатися без кого-небудь через розходження в поглядах, сварку і т. ін.” [13, p. 1521] (“1. Do not allow to do anything. // Do not allow to use something, to happen, to exist for something” [13, p. 376], *to lose* – “to be left without someone, something (due to various reasons). // To destroy someone, something. 2. To be left without someone as a result of his death. // To left without someone or something during a battle, war. // To be left without someone due to a difference of opinion, a quarrel, etc.” [13, p. 1521]) – the selection of formal means of denial in the presented interpretations is ours. As we can see, in the explanation of each of the semantic nuances, the lexemes *байдужий*, *відсутній*, *зайвий*, *забороняти*, *утрачати* (*indifferent*, *absent*, *redundant*,

to prohibit, *to lose*), there is either service component (participle *не*, preposition *без*), or a word-forming formant (prefixes *не-*, *ні-*, *без-*) with a negative meaning.

The lexemes used in modern media texts, the accompanying meaning of negation of which is conveyed holistically by the entire structure of the word, are correlated with the generalized negative meaning of morphological or word-forming counterparts, cf.: *Звичайно, ми розуміємо, що окупантам байдуже, що буде з територією України* (*Of course, we understand that the occupiers do not care what will happen to the territory of Ukraine*) (<https://www.president.gov.ua>, October 20, 2022) and *Звичайно, ми розуміємо, що для окупантів немає значення, що буде з територією України; В Росії всі байдужі до війни і вбивства українців* (*Of course, we understand that for the occupiers, it does not matter what happens to the territory of Ukraine; In Russia, everyone is indifferent to the war and the killing of Ukrainians*) (<https://gazeta.ua>, September 23, 2022) and *В Росії всі не зв'язують на війну і вбивства українців; Росія принесла в Україну, у Європу такі проблеми, яких ми й уявити не могли ще кілька місяців тому. Це фактично повна відсутність лікування для хворих на рак. Це вкрай ускладнений чи повністю відсутній доступ до інсуліну для хворих на цукровий діабет* (*In Russia, everyone ignores the war and the killing of Ukrainians; Russia has brought such problems to Ukraine, to Europe, which we could not have imagined just a few months ago. This is actually a complete lack of treatment for cancer patients. This is extremely complicated or completely absent access to insulin for patients with diabetes*) (<https://www.president.gov.ua>, May 5, 2022) and *Фактично зовсім не лікують хворих на рак. Ускладнений доступ до інсуліну чи його повністю немає для хворих на цукровий діабет; Ми не можемо дозволити собі зупинитися. Це мій головний сигнал усім, хто десь там щось думає. Дехто навіть із лідерів, штовхаючи нас кудись, у чийсь зайві обійми* (*In fact, they do not treat cancer patients at all. There is complicated access to insulin or its complete absence for patients with diabetes; We cannot afford to stop. This is my main message to anyone out there who is thinking something. Some even from the leaders, pushing us somewhere, into someone's unnecessary hugs*) (<https://www.president.gov.ua>, September 10, 2022) and *Дехто навіть із лідерів, штовхаючи нас кудись, у чийсь непотрібні обійми; Руїнуючи культурну спадщину, ворог і нині на окупованих територіях забороняє навчання державною мовою...* (*Some even from the leaders, pushing us somewhere, into someone's unnecessary hugs; Destroying the cultural heritage, the enemy still prohibits teaching in the state language in the occupied territories...*) (<https://www.president.gov.ua>, November 9, 2022) and *Руїнуючи культурну спадщину, ворог і нині на окупованих територіях не дозволяє навчання державною мовою* (*Destroying the cultural heritage, the enemy still does not allow teaching in the state language in the occupied territories*). Determining the functional potential of lexical resources, M. P. Bagan claims that, on the one hand, they “simplify communication, as they enable complex transmission of certain information with a negation, and, on the other hand, this negation is functionally limited by a specific content structure” [1, p. 127]. As evidenced by the researched source base, lexical means of negation mainly function alongside others, in particular, morphological or word-forming ones, which helps to avoid excessive use of the same language units with analyzed semantics, and they also implement a specific stylistic task: often, in addition to negation, they emphasize something and give the statement a touch of sensuality, for example: “Якщо сьогодні Україна не зупинить Росію, то чому Росія має зупинитися десь іще? Вони побачать, що світ не спроможний їх зупинити”, – додав Андрій Єрмак. Очільник Офісу Глави держави звернув увагу на те, що Україні досі бракує зброї... (“If today Ukraine will not stop Russia, why should Russia stop somewhere else? They will see that the world cannot stop them”, *Andriy Yermak* added. *The head of the Office of the Head of State drew attention to the fact that Ukraine still lacks weapons...*) (<https://www.president.gov.ua>, August 2, 2022).

In the media space of the period of the Russian-Ukrainian war, the lexical means of negation form various part-language groups, among which a significant number are nouns and adjectives denoting the following:

1. Social status of people: *сирота* (orphan) (in the corpus of actual material it is usually used with the meaning “has no parents”), *вдова* (widow) (“has no husband”). In connection with military actions, bombings, as a result of which Ukrainians suffer and die, these tokens were updated in the press, for example: *Понтифік зауважив, що в його пам’яті сливаються багато трагічних історій, про які він дізнався, передусім – про дітей, яких було вбито, поранено чи які залишилися сиротами* (The Pontiff noted that many tragic stories that he learned about come to his mind, primarily about children, who were killed, wounded or orphaned) (<https://umoloda.kyiv.ua>, November 26, 2022); *Російський удар по столиці забрав життя лікарки-гематолога Охматдиту і залишив її 5-річного сина Гришу повним сиротою* (The Russian attack on the capital took the life of the hematologist of Okhmatdyt and left her 5-year-old son Grisha a complete orphan) (<https://gazeta.ua>, November 11, 2022); *Сергій був світлою і доброю людиною. Був веселим. Його ненавиділи лише ті, хто був за Росією*, – додала *вдова* (“Sergii was a bright and kind person. Was fun. Only those who were for Russia hated him”, the widow added) (<https://gazeta.ua>, May 30, 2022). To a large extent, it breaks the tradition of using and the accompanying emotional load of the lexeme *orphan* associated with the image of the Russian president: *Постійний представник Канади в Організації Об’єднаних Націй Боб Рей заявив, що президент Росії Володимир Путін має “титу фобії” і нагадує дитину, яка вбиває своїх батьків і потім кричить “рятуйте мене, я сирота”* (Canada’s Permanent Representative to the United Nations Bob Rae said that Russian President Vladimir Putin has a “type of phobia” and resembles a child who kills his parents and then shouts “save me, I’m an orphan”) (<https://gazeta.ua>, October 13, 2022). In the given sentence, contempt for the head of Russia is rather aptly emphasized, his cruelty is stressed in a sarcastic-ironic and mocking way;
2. Enemies, Russian invaders: *Сумщину російські заїди обстріляли з “градів” та гелікоптера – постраждала школа* (Russian zaidas shelled Sumy region with hail and a helicopter – a school was damaged) (headline) (<https://umoloda.kyiv.ua>, May 4, 2022); *Чужинці без жалю й без розбору стріляють по цивільних автіваках* (Foreigners mercilessly and indiscriminately shoot at civilian cars) (<https://gazeta.ua>, October 13, 2022). We consider the presence of other implicit and specialized linguistic units in their interpretation for this function to be proof of inclusion of the lexemes *заїда* й *чужинець* (*zaida* and *chuzhinets* (alien, foreigner)) in the group of means of expressing negation: “*Заїда*. розм. Людина, яка прибула, прийшла звідки-небудь, нетутешня. // *зневажл.* *Чужоземний* загарбник” [13, с. 393]; «*Чужинець*. 1. Громадянин, підданий *чужої* держави, країни; *іноземець*. // *Загарбник*, ворог (у 2 знач.). 2. *Чужа*, нетутешня, захожа людина” (“*Zaida*. colloquial. The person who arrived, came from somewhere, is not native. // *despise* An alien invader” [13, p. 393]; “Stranger. 1. Citizen, subject of a foreign state or country; foreigner. // Invader, enemy (in 2 meanings). 2. A stranger, a visitor”) [13, p. 1608]. In the studied media sources, the analyzed lexemes have a negative evaluative meaning; they are associatively connected with the threat posed by enemies to Ukrainian land. In the sentence *...першочерговим завданням для мене є нагадати про те, що в мій дім прийшли чужинці вбивати й калічити життя, нищити й переписувати мою культуру...* (the primary task for me is to remind that foreigners came to my house to kill and mutilate life, destroy and rewrite my culture) (<https://www.president.gov.ua>, November 29, 2022), in addition to the negator *чужинці* (foreigners), an expressive stylistic effect is also revealed by the homogeneous predicates *вбивати*, *калічити*, *нищити* (to kill, to maim, to destroy), which give dynamism to what is said. In part, the negators of this group are presented in contexts with shades of scathing mockery, sarcasm: *Російські заїди вкрали унітаз із поштового відділення на Харківщині* (Russian aliens stole a toilet from a post office in Kharkiv region) (headline) (<https://www.nta.ua>, September 27, 2022);
3. Empty housing abandoned by residents, settlements without people: *Без людей та відріаних хат – село на Харківщині стало пусткою* (Without people and surviving houses - a village in the Kharkiv region became a wasteland) (headline) (<https://gazeta.ua>, September 13, 2022); *Пусткою стоїть згарище* (The fire is empty) (<https://gazeta.ua>, June 30, 2022); *Колись велике і живе село стало тепер пусткою. Сюди прийшов «руський мир» і залишив по собі смерть і розруху* (The once large and “living” village has now become a wasteland. “Russian world” came here and left behind itself death and destruction) (<https://gazeta.ua>, July 12, 2022); *Десятки українських міст і сотні селищ зруйновані вицят через обстріли з російської авіації та артилерії. Це просто руїни. Чорні, випалені, порожні міста* (Dozens of Ukrainian cities and hundreds of villages have been completely destroyed by shelling from Russian aircraft and artillery. It’s just ruins. Black, burnt, empty cities) (<https://www.president.gov.ua>, May 27, 2022);
4. False reasoning. With this meaning, the media use such implicit means as *брехня*, *вигадка*, *омана* (lies, fabrications, and delusions). The word *брехня* (lie), although it goes beyond the boundaries of established forms of public speech, makes it possible to vividly and expressively emphasize the fact that someone (this is mainly about the Russian president, politicians, media persons, etc.) deliberately tells lies, deliberately and insidiously tricks. For example: *Багато тиранів поширюють велику брехню, щоб виправдати свої злочини, і нав’язують свою волю за допомогою терору. Українці показали, що брехню можна викрити, а терору протистояти* (Many tyrants spread big lies to justify their crimes and impose their will through terror. Ukrainians showed that lies can be exposed and terror can be resisted) (<https://gazeta.ua>, December 21, 2022). The mentioned lexeme, which has a bright communicative and pragmatic effect, is intended to affect the sensory sphere of the recipient and realizes the effect of live communication, was also used by the President of Ukraine in an address to the university community of Ireland: *Російська агресія не зупиняється ні на день. Як ні на день не зупиняється російська брехня світу. Тому за все це так само ні на день не має зупинитися й міжнародний тиск на Росію* (Russian aggression does not stop for a day. No matter what, the Russian lies to the world do not stop for a day. Therefore, for all this, the international pressure on Russia should not stop for a single day) (<https://www.president.gov.ua>, November 18, 2022). In addition, we come across contexts where the word *брехня* (lie) contrasts with its antonymic counterpart – the lexeme *правда* (truth), giving the text evaluativeness: *Світло завжди перемагає темряву, а правда брехню* (Light always defeats darkness, and truth defeats lies) (<https://gazeta.ua>, November 24, 2022). In addition to the noun *брехня* (lie), the accompanying negative meaning is covertly implemented by the words *вигадка*, *фантазія*, *фейк*, *фейкотворчість* (fiction, fantasy, fake, forgery), etc.: *Також СБУ знайшла брошури і книжки ксенофобського і ненависницького змісту з образливими вигадками про інші національності і релігії* (The SBU also found pamphlets and books of xenophobic and hateful content with offensive fictions about other nationalities and religions) (<https://gazeta.ua>, December 2, 2022); *Представники різних країн вже відкрито троять росіян за їхні вигадки* (Representatives of various countries are already openly trolling Russians for their fabrications) (<https://gazeta.ua>,

- October 31, 2022); Представник РФ насмішив Радбез ООН **фейком** про бойових комарів (The representative of the Russian Federation make laugh the UN Security Council with a fake about combat mosquitoes) (headline) (<https://ua.news>, October 28, 2022); **Збочена фантазія** російських псевдодипломатів пробила чергове дно. Новий шедевр **фейктворчості** представив представник росії в ООН Василь Небензя (The perverted fantasy of Russian pseudo-diplomats has hit another bottom. A new masterpiece of forgery was presented by Russia's representative at the UN, Vasily Nebyenzia) (<https://ua.news>, October 28, 2022). In the last example, an ironic-sarcastic mood is also conveyed by the attributive member of the sentence *збочена* (perverted), subordinated to the noun *фантазія* (fantasy);
- Lack of clothes, shoes, food, etc. Among the lexemes of this group, the adjectives *гоłodний*, *голий*, *босий* (*hungry*, *naked*, *barefoot*) dominate, which characterize the Russian military: *Противник має проблеми з матеріальним постачанням, паливом і боєприпасами й іншими видами матеріального забезпечення. Голі, босі окупанти* (The enemy has problems with material supply, fuel and ammunition and other types of material support. *Naked, barefoot occupiers*) (<https://gazeta.ua>, March 24, 2022); *Голі, босі і голодні: як виглядають полонені «денацифікатори» з РФ* (*Naked, barefoot, and hungry: what captured "denazifiers" from the Russian Federation look like*) (headline) (<https://rivne.media>, May 12, 2022). In the last sentence, the stringing of three lexemes-negators at once, as well as the noun "денацифікатори" ("denazifiers"), which in its structure contains service formant with the negative semantics *de-* (*de-*), not only makes it possible to more vividly and accurately convey the low level of supply of the Russian occupiers, but also ensures an increase in the perlocutionary effect, strengthens the negative value;
 - Something devoid of content, insignificant, unnecessary, for example: *Обладнання, яке забезпечує українські банківські розрахунки, надійно захищене, тож погрози ворогів абсолютно порожні, заявив голова парламентського комітету з питань фінансів, податкової та митної політики Данило Гетманцев* (The equipment that provides Ukrainian bank settlements is reliably protected, so the threats of enemies are absolutely empty, said the head of the parliamentary committee on finance, tax and customs policy Danylo Hetmantsev) (<https://gazeta.ua>, 20.12.2022); *Кремлівські погрози – порожній звук, на який не варто звертати увагу* (Kremlin threats are an empty sound that can be easily ignored) (<https://gazeta.ua>, December 16, 2022).
- In media texts of the period of the Russian-Ukrainian war, the lexical implementation of negation is associated with verbs that most often indicate the following:
- Absence, disappearance, loss of orientation in something, termination, lack of someone or something: *бракувати*, *зубити*, *зникати*, *припинити* (*to lack*, *to lose*, *to disappear*, *to stop*), etc. The lexeme *бракувати* (*to lack*) is usually combined with the words *грошей*, *коштів*, *ресурсів*, *зброї*, *ракет*, *їжі*, *води*, *ліків*, *найнеобхіднішого* (*money*, *funds*, *resources*, *weapons*, *missiles*, *food*, *water*, *medicine*, *the most necessary*): *...нині коштом державного бюджету розпочато відновлення лише понад 11 тис. об'єктів. Тобто ремонтують усього 13% від необхідного, адже Україну критично бракує фінансових ресурсів...* (currently, the restoration of more than 11,000 objects has been started at the expense of the state budget. That is, they are repairing only 13% of what is needed, because Ukraine is critically lacking in financial resources) (<https://www.president.gov.ua>, October 7, 2022); *У місті критична ситуація: бракує їжі, води, ліків* (The city is in a critical situation: there is a shortage of food, water, and medicine) (<https://gazeta.ua>, December 18, 2022); *Атаку росіян відбито від Сєвєрянського лісництва, в лікарнях Луганська вже бракує найнеобхіднішого навіть для поранених* (The Russian attack was repulsed from Serebryansk Forestry, Luhansk hospitals already lack the most necessary even for the wounded) (<https://gazeta.ua>, December 18, 2022);
 - Restriction, deprivation of someone from performing some speech, physical, and other actions. M. P. Bagan uses the term *causative verbs* to denote lexemes with such semantics [1, p. 139]. For example: *...вороже командування заборонило розвантажувати артилерійські боєприпаси менше ніж за 100 км від лінії зіткнення...* (the enemy command prohibited the unloading of artillery ammunition less than 100 km from the contact line) (<https://gazeta.ua>, December 14, 2022). According to the semantic parameters, the verb forms of the analyzed variety correlate with verbs accompanied by the particle *не* (*not*), cf.: *Газпрому та Роснефті заборонили виїжджати за кордон* (Gazprom and Rosneft employees were forbidden to leave abroad) (headline) (<https://gazeta.ua>, December 18, 2022) and *Співробітникам Газпрому та Роснефті не дозволяють виїжджати за кордон* (Gazprom and Rosneft employees are not allowed to leave abroad);
 - False interpretation of some events, spreading of false rumors. Among the nominations of this subgroup, the colloquial lexeme *брехати* (*to lie*) is observed, which goes beyond the boundaries of normativity and serves as a means of emotional reaction to what is heard or read, for example: *Російські пропагандисти брешуть, коли кажуть, ніби цей терор проти нашої інфраструктури і людей може якось загальмувати активні дії наших військових чи створити якісь труднощі нашій обороні* (Russian propagandists lie when they say that this terror against our infrastructure and people can somehow inhibit the active actions of our military or create some difficulties for our defense) (<https://www.president.gov.ua>, October 22, 2022); *У США розповіли, як Росія бреше про знищення установок HIMARS* (The USA told how Russia lies about the destruction of HIMARS launchers) (headline) (<https://gazeta.ua>, November 5, 2022); *У Мініборони РФ збрехали про обстріл станції Чаплін* (The Ministry of Defense of the Russian Federation lied about the shelling of the Chapline station) (headline) (<https://gazeta.ua>, August 25, 2022); *Звичайно, обмеження, які запроваджує Росія, ні на що особливо не впливають. Це більше пропагандистська річ, щоб на російському ж телебаченні могли збрехати, ніби Росія на щось здатна в дипломатії* (Of course, the restrictions introduced by Russia do not particularly affect anything. This is more of a propaganda thing, so that on Russian television they can lie, as if Russia is capable of something in diplomacy) (<https://www.president.gov.ua>, November 18, 2022).

An important role in the implementation of negative content is played by word-forming language units, in particular, prefixes. Such a functional potential is revealed by both specific (*не-*, *зне-*, *без-*, *ні-*) and borrowed (*анти-*, *контр-*, *де-*) (*anti-*, *counter*, *de*) formants. The largest group consists of secondary nominations with the prefix *не-*, for example: *"Ми все це відновимо і все це пройдемо, тому що ми з вами незламний народ. Дякую всім! Бережіть себе"*, – сказав президент ("We will restore all this and pass all this, because you and I are an indomitable people. Thank you all! Take care of yourself", the President said) (<https://gazeta.ua>, November 22, 2022); *Україна зараз готується до офіційних кроків, які доведуть незаконне перебування РФ у Раді безпеки ООН...* (Ukraine is currently preparing for official steps that will prove the illegal presence of the Russian Federation in the UN Security Council...) (<https://gazeta.ua>, December 20, 2022); *На сьогодні всі три атомні станції, що розташовані на неокупованій території, вже працюють* (To date, all three nuclear plants located in the unoccupied territory are already operating) (<https://gazeta.ua>, November 25, 2022); *"Сьогодні ми відзначаємо тих, хто уособлює українську незламність, є обличчям нашої великої держави"*, – зазначив Володимир

Зеленський (“Today we honor those who represent Ukrainian indomitability, who are the face of our great state: Volodymyr Zelenskyy noted) (<https://www.president.gov.ua>, December 2, 2022); Глава держави також відзначив тих, хто **невтомно** працював задля звільнення українців із **неволі** (The head of state also praised those who worked tirelessly to free Ukrainians from captivity) (<https://www.president.gov.ua>, December 2, 2022). In terms of functional potential, variant *зне-* gravitates toward the formant *не-*, it usually structures verbs or derivatives formed from them and often indicates the deprivation of something expressed by the creative basis: *За добу піротехніки знешкодили 305 одиниць ворожих мін, вибухівок та боєприпасів* (During the day, pyrotechnics neutralized 305 units of enemy mines, explosives, and ammunition) (<https://gazeta.ua>, December 21, 2022); *За словами Гайдая, окупанти зневірилися у своєму «Росія-назавжди» і вже самі чекають на українських військових* (According to Gaidai, the occupiers have lost hope in their “Russia - forever” and are already waiting for the Ukrainian military themselves) (<https://gazeta.ua>, November 17, 2022); “*Коли російські можливості для терору будуть знешкоджені* нашими спільними зусиллями з партнерами, Росії не залишиться нічого іншого, ніж думати про мир”, – сказав Президент (“When Russian opportunities for terror are neutralized by our joint efforts with partners, Russia will have nothing else to do but think about peace”, the President said) (<https://gazeta.ua>, October 17, 2022). Within the specific word-forming means of expressing negation, the prefix *без-* is observed, which takes part in the formation of nouns, adjectives, adverbs, for example: *Сьогодні Росія завдала чергових ударів з повітря по українських містах. Знову застосувала іранські безпілотники* (Today, Russia made another air strike on Ukrainian cities. It used Iranian drones again) (<https://www.president.gov.ua>, October 6, 2022); “*І риторика, погрози, які Путін знову й знову висуває, посилюють напруження, є небезпечними й бездумними*”, – заявив Столтенберг (“Both the rhetoric and threats that Putin makes again and again increase tensions, are dangerous and thoughtless”, Stoltenberg said) (<https://gazeta.ua>, September 23, 2022); *Україна, і світ, і сама Росія розуміють, що заяви про причетність України до створення ядерної небезпеки лише постановка за бездарним сценарієм* (Ukraine, the world, and Russia itself understand that statements about Ukraine's involvement in the creation of a nuclear threat are only staged in a talentless scenario) (<https://gazeta.ua>, March 11, 2022); *У міру того, як рятувальники розбирають завали, навкруги стає все тихіше і безлюдніше* (As the rescuers dismantle the debris, the surroundings become quieter and more deserted) (<https://gazeta.ua>, June 30, 2022). Recently, the noun *безпілотник* (drone) belongs to the field of actively used lexemes with the service formant *без-* (without).

The group of uncommon prefixes-markers of negation is supplemented by the formant *ні-*, which joins pronouns and adverbs with the meaning of place and time. Usually, such linguistic units function together with other markers of negation: *Може, це звучить не так, як хтось зараз очікує. Може, не так, як у новинах. Але потрібно розуміти: ніхто нізвідки просто так не йде, якщо не відчуває сили. Ворог не робить нам подарунків, не робить “жестів доброї волі”. Ми все це виборюємо* (Maybe it doesn't sound like what anyone expects now. Maybe not like the news. But you need to understand: no one just leaves from nowhere if they don't feel the strength. The enemy does not give us gifts, does not make “gestures of good will”. We all fight for it) (<https://www.president.gov.ua>, November 9, 2022). The accumulation of words with negative semantics not only allows focusing the reader's attention, but also serves as a means of emotional incitement. Often lexemes with the prefix *ні-* are presented in texts built on the basis of contrast. This form of information presentation gives the statement a special expression. For example: *Ворог може подарити по наших містах, але ніколи – по нашій єдності. Рашисти спалили музей Сквороди, десятки церков, сотні шкіл і дитячих садочків... Але вони нічого не можуть вдіяти проти нашої філософії. Проти того, що українці чують, бачать і знають змалечку. Російські ракети це зотні зігнати українців у бомбосховища, але ніхто з наших людей*

там не тремтуть (The enemy can strike at our cities, but never at our dignity. Racists burned down the Skovoroda museum, dozens of churches, hundreds of schools and kindergartens... But they can't do anything against our philosophy. Against what Ukrainians hear, see and know from an early age. Russian missiles are still capable of driving Ukrainians into bomb shelters, but none of our people are trembling there) (<https://www.president.gov.ua>, October 14, 2022).

A limited manifestation is inherent in lexemes with the borrowed prefix *анти-* (anti-): *Такі режими, як російський, іранський, білоруський стоять на боці антиєврейства* (Such regimes as Russian, Iranian, and Belarusian are on the side of the anti-world) (<https://gazeta.ua>, October 18, 2022); *І тут з нами немає представників Росії – держави, яка географічно ніби й належить до Європи, але з погляду своїх цінностей і поведінки є найбільш антиєвропейською державою світу* (And there are no representatives of Russia with us here - a state that geographically seems to belong to Europe, but from the point of view of its values and behavior is the most anti-European state in the world) (<https://gazeta.ua>, October 6, 2022). Highlighted words with negator prefixes convey a negative meaning in a condensed manner, indicate something different from usual objects, signs, phenomena, etc. Sometimes, the analyzed verbal signs are part of the narratives actively spread by the Kremlin authorities and Russian propagandists. Therefore, when they enter the Ukrainian communicative sphere, they acquire an appropriate design, in particular, writing in quotation marks, as well as an ironic-mocking sound. For example: “*Класична російська шизофренія: вранці заявляєш, що Москва прагне переговорів, а вже ввечері, що твоя мета – позбутися антинародного ківського режиму*”, – прокоментував Подоляк (“Classic Russian schizophrenia: in the morning you declare that Moscow wants negotiations, and in the evening that your goal is to “get rid of the anti-people Kyiv regime”, Podolyak commented) (<https://umoloda.kyiv.ua>, July 26, 2022); “*Вирішуючи скинути “антиісторичні режими”, важливо самому випадково не опинитися на безумовному смітнику історії*” (“When deciding to overthrow the “anti-historical regimes”, it is important not to accidentally end up in the unconditional dustbin of history”) (<https://umoloda.kyiv.ua>, July 26, 2022).

A peculiar reaction of Ukrainians to the challenges of war should be considered, in particular, in the actualization and production of lexemes with the borrowed service formant *де-* (*de-*). This process gained momentum after the Russian authorities and propagandists, justifying a full-scale invasion, used the derivatives *демільтаризація* and *денацифікація* (demilitarization, de-Nazification), later – *десатанізація*, *дешаїтанізація* (de-satanization, de-devilization), which are usually quoted in Ukrainian media texts: *Близько 4 години за ківським часом Путін оголосив про “спеціальну військову операцію”. Заявив про “демільтаризацію і денацифікацію” України* (About 4 hours Kyiv time, Putin announced a “special military operation”. He announced the “demilitarization and denazification” of Ukraine) (<https://gazeta.ua>, December 18, 2022); *Три роки тому нашою метою була реальна децентралізація. Три роки по тому метою РФ стала нікому незрозуміла “денацифікація”* (Three years ago, our goal was real decentralization. Three years later, the goal of the Russian Federation became the incomprehensible “denazification”) (<https://www.president.gov.ua>, June 22, 2022); *Також у росії цілком серйозно заговорили про чергову зміну цілей так званої “спецоперації”. «Геніальна» думка про «десатанізацію» народилася в голові помічника секретаря рдббезу рф алексея навлова* (Also, in Russia, there was quite serious talk about another change in the goals of the so-called “special operation”. The “brilliant” idea about “de-satanization” was born in the head of the assistant secretary of the Security Council of the Russian Federation Alexei Pavlov) (<https://www.pravda.com.ua>, October 1, 2022); *Десатанізація і дешаїтанізація*: у Кремлі винайшли нову причину вторгнення в Україну (De-satanization and de-satanization: the Kremlin invented a new reason for the invasion of Ukraine)

(<https://prm.ua>, October 25, 2022). The selected words were actively picked up by the Ukrainian society and began to be used in ironically labeled statements addressed to the enemies or those that refer to them: *Також було влучання в базування русні в районі Нової Каховки. Демілітаризація і денацифікація русні на Херсонщині триває* (There was also a hit to the Russian base in the Novaya Kakhovka area. Demilitarization and de-Nazification of Rus in Kherson Oblast continues) (<https://gazeta.ua>, September 12, 2022); *Московитська ППО демілітаризувала власний ударний вертоліт, який перед цим обстріляв свої позиції* (The Moscow Air Defense Forces demilitarized its own attack helicopter, which had previously fired at its positions) (<https://pravda.if.ua>, July 27, 2022); *В РФ попередю репарації, демілітаризація, денацифікація та роки каяття* (In the Russian Federation, reparations, demilitarization, denazification, and years of repentance are ahead) (<https://gazeta.ua>, September 12, 2022); *Секретар РНБО Олексій Данілов прокоментував заяву Радабзу РФ, який заявив про необхідність “десатанізації” України. Про це він повідомив у Twitter. “Путінський Радабз – це 13 членів, та сама “чортова дюжина”. І кому тут потрібна “десатанізація”? Але у нас є чудові екзорцисти з великою практикою й досвідом. ЗСУ поспішають на допомогу!” – йдеться в повідомленні* (Oleksiy Danilov, Secretary of the National Security Council, commented on the statements of the Security Council of the Russian Federation, which stated the need for “desatanization” of Ukraine. He announced this on Twitter. “Putin’s Security Council consists of 13 members, the same “devil’s dozen”. And who needs “desatanization” here? But we have excellent exorcists with a lot of practice and experience. The Armed Forces are rushing to help!” - the message says) (<https://newsua.one>, October 26, 2022). In some cases, the analyzed lexemes leave the boundaries of the so-called standard, increasing the expressive and evaluative load: *“Денацифікація” риби: росіяни запустили ракету в річку* (“Denazification” of fish: the Russians launched a rocket into the river) (headline) (<https://gazeta.ua>, May 22, 2022); *Десатанізація Катарстану назріла* (De-satanization of Katsarstan is ripe) (headline) (<https://enigma.ua>, November 29, 2022). In addition to the above, we come across a number of other nominations formed according to the same model: *Росія залякує і шантажує, щоб світ перестав допомагати тим, кого вона вбиває. Вона використовує все – від продовольчої кризи до радіаційного шантажу, від дестабілізації енергоринків до ядерного шантажу* (Russia intimidates and blackmails the world to stop helping those whom it kills. It uses everything - from the food crisis to radiation blackmail, from the destabilization of energy markets to nuclear blackmail) (<https://www.president.gov.ua>, October 6, 2022); *Росія продовжує руйнувати міжнародні відносини й життя людей і видає, ніби разом з усіма проти цієї дестабілізації борються* (Russia continues to destroy international relations and people’s lives and pretends that it is fighting against this destabilization together with everyone) (<https://www.president.gov.ua>, November 18, 2022); *Московська імперія має бути повністю деколонізована та розділена* (The Moscow Empire must be completely decolonized and divided) (<https://gazeta.ua>, August 9, 2022); *Після поразки РФ та завершення війни має відбутися її демілітаризація та денуклеаризація* (After the defeat of the Russian Federation and the end of the war, its demilitarization and denuclearization should take place) (<https://gazeta.ua>, December 10, 2022). A special functional potential is revealed by occasionalisms, which testify to the linguistic creativity of Ukrainian people and contribute to expressive phrasing. They are often used in contexts alongside well-known and recently updated so-called *de*-forms, for example: *Тим часом у Британії аносували план, згідно з яким “зелені” торговельні угоди зможуть допомогти покласти край залежності світу від російських нафти і газу та “депутінізувати” світову економіку* (Meanwhile, in Britain, a plan was announced, according to which “green” trade agreements could help end the world’s dependence on Russian oil and gas and “de-Putinize” world economy) (<https://www.epravda.com.ua>, May 18, 2022); *Постійний представник України при ООН Сергій Кислиця переконаний, що після неминучої поразки росії у війні проти*

України має відбутися депутінізація та денуклеаризація цієї території (The Permanent Representative of Ukraine to the UN, Serhiy Kyslytsia, is convinced that after the inevitable defeat of Russia in the war against Ukraine, the deputization and denuclearization of this territory should take place) (<http://www.golos.com.ua>, December 8, 2022); *“А шлях до миру – це депутінізація Європи, депутінізація світу. І, зрештою, ми чекаємо реакції російського народу та депутінізації самої Росії”, – наголосив він* (Петро Порошенко) (“And the way to peace is deputization of Europe, deputization of the world. And, in the end, we are waiting for the reaction of the Russian people and the deputization of Russia itself”, he (Petro Poroshenko) emphasized) (<https://www.dw.com>, November 13, 2022) – the repetition of the highlighted word serves as a specific language technique aimed at consolidating what was said, as a stereotype in people’s minds.

In addition to the phraseological, lexical, and word-building levels, the means of negation show an attitude to the morphological tier of the language. The system of linguistic units under consideration is structured by service parts of speech. In the specified morphological palette, the particle *ne*, specialized in modeling objection situations, takes first place, while *ni* belongs to the less frequently used ones. For example: *Росія хоче, щоб в Україні не було світла на Новий рік і Різдво* (Russia wants Ukraine to have no lights on New Year’s and Christmas) (<https://gazeta.ua>, December 22, 2022); *Україна ніколи не хотіла цієї війни. Україна не робила нічого, щоб її спровокувати* (Ukraine never wanted this war. Ukraine did nothing to provoke it) (<https://www.president.gov.ua>, October 6, 2022); *Україна стоїть і ніколи не здасться!* (Ukraine stands and will never surrender!) (<https://www.president.gov.ua>, November 22, 2022); *Чи хоче держава-терорист миру? Очевидно, що ні* (Does the terrorist state want peace? Obviously not) (<https://www.president.gov.ua>, September 10, 2022). There are sentences with both particles, the use of which increases the effect of negation: *Ні, ми не можемо собі дозволити зупинитися* (No, we cannot afford to stop) (<https://www.president.gov.ua>, September 10, 2022). In some places in public communication, we find the stringing of the part *ne*, which makes it possible to focus attention on the scale of the problems. For example, this technique is used in public communication, in particular, in the speeches of Volodymyr Zelensky: *Подивіться на поле бою в Україні зараз. Це така інтенсивна війна, яку абсолютна більшість держав просто не змогла б вести. І саме тому цю війну потрібно виграти зараз – виграти в Україні. Щоб російський флот не міг заблокувати це й інші порти на Чорному, Середземному чи будь-якому іншому морі. Щоб російські танки не наступали на Варшаву чи знову на Прагу. Щоб російська артилерія не била по країнах Балтії. Щоб російські ракети не били по території Фінляндії чи будь-якої іншої країни* (Look at the battlefield in Ukraine now. This is such an intense war that the absolute majority of states simply would not be able to wage. And that is why this war must be won now – to be won in Ukraine. So that the Russian fleet could not block other ports on the Black, Mediterranean, or any other sea. So that Russian tanks do not advance on Warsaw or again on Prague. So that Russian artillery does not hit the Baltic states. So that Russian missiles do not hit the territory of Finland or any other country) (<https://www.president.gov.ua>, October 6, 2022). As it is known, in order to achieve a pragmatic effect, the head of state often builds his speeches on the basis of contrast, in the implementation of which negation constructions and their correlates – affirmative statements – take part: *Коли хтось хоче переговорів – він такою не робить. А коли хтось терорист – він робить саме так* (When someone wants negotiations, he does not do so. And when someone is a terrorist, he does exactly that) (<https://www.president.gov.ua>, 09.10.2022).

In the language of modern journalism, the role of a morphological negator is performed by the prepositions *без*, *крім* (окрім), *за винятком*, *на відміну від*, *замість* (without, except (apart from), except for, in contrast to, instead of), etc.: *І всі ви добре поінформовані про те, скільки всього робила*

Україна, щоб спробувати переконати Росію жити без війни (And you are all well informed about how much Ukraine did to try to convince Russia to live without war) (<https://www.president.gov.ua>, October 6, 2022); “Почервоніли” всі області, окрім Одещини, Чернігівщини, Сумщини (All regions, except Odesa, Chernihiv Oblast, and Sumy Oblast, “turned red”) (<https://gazeta.ua>, December 19, 2022); **Замість** компенсації за зруйноване житло на території так званої ЛНР росіяни запропонували людям іпотеку (Instead of compensation for destroyed housing in the territory of the so-called LPR, the Russians offered people a mortgage) (<https://gazeta.ua>, December 17, 2022). Compared to the particles *не*, *ні*, they express the negative content in a condensed manner, which is evidenced by transformed constructions with specialized negative components: Сотні сімей залишилися без житла (Hundreds of families are left without housing) (<https://www.president.gov.ua>, October 9, 2022) ← Сотні сімей **не** мають житла; У дослідженні взяли участь 100 респондентів віком від 18 років і старші в усіх областях, крім тимчасово окупованих територій України (Hundreds of families have no housing; 100 respondents aged 18 and older in all regions, except temporarily occupied territories of Ukraine, took part in the study) (<https://gazeta.ua>, December 19, 2022) ← У дослідженні взяли участь 100 респондентів віком від 18 років і старші в усіх областях + У дослідженні **не** взяли участі респонденти тимчасово окупованих територій України; Зокрема, на рівень запланованої потужності виводять блоки атомних станцій, за винятком окупованої Запорізької (100 respondents aged 18 and older in all regions took part in the study + Respondents from the temporarily occupied territories of Ukraine did not participate in the study; In particular, nuclear power plant units are brought to the level of planned capacity, with the exception of occupied Zaporizhzhia region) (<https://gazeta.ua>, December 17, 2022) ← Зокрема, на рівень запланованої потужності виводять блоки атомних станцій + На рівень запланованої потужності **не** виводять блоки Запорізької атомної станції (In particular, nuclear power plant units are brought to the level of planned power + Zaporizhzhia nuclear power plant units are not brought to the level of planned power). In media sources, negative prepositions not only realize the semantic nuances assigned to them, but also play a linguistic stylistic role and serve as a vivid rhetorical tool. Let us comment on an excerpt from the speech of the President of Ukraine: “*Читайте по губах: Без газу чи без вас? Без вас. Без світла чи без вас? Без вас. Без води чи без вас? Без вас. Без їжі чи без вас? Без вас. Холод, голод, темрява й спрага – для нас не так страшно й смертельно, як ваші “дружба й братерство”. Але історія все розставить по місцях. І ми будемо з газом, світлом, водою та їжею... і БЕЗ вас!*”, – констатував президент України” (“Read lips: Without gas or without you? Without you. Without light or without you? Without you. Without water or without you? Without you. Without food or without you? Without you. Cold, hunger, darkness, and thirst are not as scary and deadly for us as your “friendship and brotherhood”. But history will put everything in its place. And we will be with gas, light, water, and food... and WITHOUT you!”, stated the President of Ukraine”) (<https://df.news>, September 11, 2022). The stringing of the preposition *без* (without) in the questions and answers was used to emphasize the importance of what was communicated. In this way, Volodymyr Zelensky tried not only to convey information to each listener, but also to emphasize the irrefutability of what was said, which he stressed in the concluding sentence with the preposition *БЕЗ* (WITHOUT) in capital letters. In addition, anaphora *без* (without) provides textual expression and emotionality.

In the Ukrainian language, the semantics of negation is endowed with conjunctions, among which the repeated *ні* ... *ні* dominates, which usually functions in sentences with a negative predicate: Мільйони **не** матимуть **ні** опалення, **ні** води. Все це буде наслідком російських ракетних і безпілотних ударів по нашій енергетичній інфраструктурі (Millions will have neither heating nor water. All this will be a consequence of Russian missile and drone strikes on our energy infrastructure)

(<https://www.president.gov.ua>, November 22, 2022). Repetition of the specified service word gives the message categorically and expressiveness, and also emphasizes the complete absence of what is the named by the word, next to which the conjunction is used.

The manifestation of the negative function is associated with paired gradational conjunctions *не так..., як, не тільки..., а й, не тільки..., але й* (not so..., as, not only..., but also), which give the statement a tone of polemic, for example: Я ж прошу вас підтримати нашу країну саме зараз чітким рішенням – надати все те, що може **не тільки** зберігати наявну динаміку на полі бою в Україні, **а й** прискорити рух наших сил оборони до перемоги (I am asking you to support our country right now with a clear decision - to provide everything that can not only preserve the existing dynamics on the battlefield in Ukraine, but also accelerate the movement of our defense forces to victory) (<https://www.president.gov.ua>, December 19, 2022); Ще з травня окупанти намагаються зламати наш Бахмут, але час іде, і Бахмут ламає вже **не тільки** російську армію, **а й** російських найманців, які прийшли на заміну втрачених армій окупантів (Since May, the occupiers have been trying to break our Bakhmut, but time passes, and Bakhmut breaks not only the Russian army, but also the Russian mercenaries who came to replace the lost armies of the occupiers) (<https://www.president.gov.ua>, December 2022).

4 Conclusion

Therefore, negation is a generalized linguistic concept of a logical-psychological, linguistic-cognitive, and subjective-objective orientation, the content of which is based on negative information about various objects of the environment, situations, actions, processes, states, properties, etc., often accompanied by the presence of evaluative and emotional-expressive load. In the media texts of the period of the active phase of the Russian-Ukrainian war, an extensive group of linguistic units of different levels, which perform the role of means of explication of negation, is presented. Phraseological and lexical markers, which are a quantitatively limited group, usually represent the negative content in hidden manner, that is, implicitly. They often acquire a special ironic sound, expressively emphasize the unreasonableness and illogicality of someone's actions, sometimes vulgarize the speech of modern journalism. In the media space of the period of the Russian-Ukrainian war, a significant number of lexical means of negation are nouns, adjectives, and verbs. An important role in the implementation of negative content is played by word-forming language units, in particular specific (*не-, зне-, без-, ні-*) and borrowed *анти-, контр-, де-* (*anti-, counter-, de-*) prefixes. Often, lexemes with these formants are presented in sentences built on the basis of contrast, which gives them a special expression. The response of Ukrainians to the challenges of the war was the actualization and production of derivatives with the borrowed official formant *де-* (*de-*). Expressions with such negators are usually marked ironically. A peculiar functional potential is revealed by occasionalisms, which testify to the linguistic creativity of the Ukrainian people and contribute to the expressiveness of what is said. Means of negation reveal a relationship to the morphological layer of the language. The corpus of factual material proves that functional parts of speech (particles, prepositions, and conjunctions) not only realize the negative semantic shades attached to them, but also play a linguistic stylistic role and serve as a bright rhetorical means.

We see the perspective of the research in the detailed study of language dynamics associated with the definition of communicative and pragmatic features of affirmative statements.

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LEXICO-SEMANTIC INNOVATIONS IN THE TEXTS OF THE UKRAINIAN MASS MEDIA ON MILITARY TOPICS

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Abstract: The article classifies lexical and semantic innovations in the texts of the Ukrainian mass media on military topics. The analyzed corpus of lexemes expanded the scope of use both in language practice and in the language of domestic Ukrainian mass media. During the research, lexemes of various partial linguistic affiliations, which are evidenced in the media information field during the period of the Russian-Ukrainian war, were comprehensively studied; the semantic nuances of language units are characterized, occasional formations are revealed, words and phrases in dynamics are considered, stylistic expressiveness in journalistic style is emphasized. In the article, for the study of lexical-semantic innovations in the language of the Ukrainian mass media, the observation method and the descriptive method are used as the main ones. At various stages of the study and classification of language units, the method of functional analysis was used to determine the stylistic load of lexical units. The source of the presented lexical material was modern Ukrainian mass media texts of both regional and all-Ukrainian information space. As evidenced by the collected mass media material of the period of the Russian-Ukrainian war (2022), the latest lexemes and well-known words with new meanings and fixed phrases that have acquired additional variants of meaning are widely used in the language of modern Ukrainian journalism. In the language of mass media, we record new verbs that are often formed from proper names, but mainly convey actions, processes, and states that are characteristic of the surnames of persons or the names of settlements. A tendency for journalists is traced - to use new nouns and occasional formations. Nouns in mass media texts often acquire new meanings that are understandable only from the context. Under the action of non-linguistic factors, a group of phrases was shaped which form new meanings and function as stable ones. Lexical-semantic innovations mostly give the language of the mass media a negative assessment: they convey contempt for the invaders and their politicians, emphasize their vulgarity and inability to resist the Ukrainian military and the people in general. Some lexemes name or characterize Ukrainian figures and soldiers for their courage, stability, and confidence in their behavior.

Keywords: vocabulary; innovations; lexical-semantic system; variants of meanings; language of Ukrainian mass media; military topics.

1 Introduction

Updating the vocabulary of the language depends on the mental and thinking processes of human consciousness, the communicative requests of the person and the assessment of a particular object of reality. The processes at the lexical level appear to be the most dynamic, because they are primarily related to changes in society. The lexical-semantic level of the modern Ukrainian literary language is characterized by a rapid pace of development, which is most evident in the language of the mass media. A special place is occupied by lexical-semantic neologisms or new variants of already known lexemes - the power of their appearing for now characterizes the innovative impulse.

Dynamism and openness, as an obvious sign of the lexical component of the language, have always interested linguists, but namely the impulsive nature of the latest developments in the language in the 21st century, caused mostly by the state of war in Ukraine, led to the actualization of relevant issues related to the analysis of such lexemes. The vocabulary became the object of research by many Ukrainian linguists: T. M. Andreeva [1], N. I. Yelnikova [25], Yu. V. Kaluzhynska [5], E. A. Kaprilovska [6], L. P. Kislyuk [7], N. F. Klymenko [8], N. M. Kostusyak [10, 11], K. Yu. Ladonya [12, 13], O. G. Mezhev [14], E. B. Novikova [18], O. A. Styshov [20-22], A. A. Taran [23], N. M. Shulska [15], and others.

The term "innovation" summarizes the appearance of everything new in human life as a result of certain types of activity,

scientific and technical progress, changes in all spheres of society, caused by new realities. In modern linguistics, there are many terms for linguistic innovations. N. F. Klymenko calls innovations concepts that denote a new phenomenon in language [8, p. 9]. A lexical innovation is a word, phrase or phraseological unit modeled by word-building way or borrowed from another language, which can be recorded in the dictionaries of neologisms [22].

Semantic innovations are new meanings of words that already existed in the language system. The emergence of such innovations is usually caused by the need for a new concept, updating the form of already existing word, the need to enrich the semantic field with an updated adapted element.

Innovative changes are found at all linguistic levels, while lexical innovation is considered the result of neologization. Society is in a state of constant change, which causes the nomination of these phenomena, but in 2022, the process of updating the vocabulary is caused by the state of war in Ukraine.

Let us note that there is no single approach in separating the terms to denote new lexemes. Some scientists consider innovations to be more permanent than neologisms, pointing out that innovations are the only names for new objects, phenomena, processes, states and actions. Other linguists call neologisms precisely concepts that did not exist before, noting that the appearance of a new name for an already existing phenomenon or concept can also be considered a new formation. New words, the authorship of which mostly belongs to a specific person and sometimes goes beyond the normative means of creation, are called occasionalisms. They are distinguished from neologisms by the fact that they arise mainly with a violation of the logic of conjunctiveness and are usually used only by an individual author in order to create a stylistic effect in a specific situation [3]. However, it is worth clarifying that it is not always possible to establish authorship in the language of modern media texts. Such novelties are represented not only in journalistic style, but also often enter written styles from colloquial speech. In this study, we will use the phrase 'lexical-semantic innovations', denoting with it language units that appeared or were activated with new variants of meanings in the means of mass communication during the period of martial law in Ukraine.

2 Method

In the article, for the study of lexical-semantic innovations in the language of the Ukrainian mass media, the observation method and the descriptive method are used as the main ones. At various stages of the study and classification of language units, the method of functional analysis was used to determine the stylistic load of lexical units.

The analyzed corpus of lexemes expanded the scope of use both in language practice and in the language of domestic Ukrainian mass media. During the study, lexemes of various partial linguistic affiliations, which were evidenced in the media information field during the period of the Russian-Ukrainian war, were comprehensively analyzed; the semantic nuances of language units are characterized, words and phrases in dynamics are considered, stylistic expressiveness in journalistic style is emphasized.

The source of the presented lexical material was modern Ukrainian mass media texts of both regional and all-Ukrainian information space.

3 Results and Discussion

In the semantic system of the language, a special place belongs to the verb. This part of the language is distinguished by the complexity of its meaning, the variety of paradigmatic and syntagmatic connections, a large number of grammatical categories and forms, etc. The verb is the most complex and

comprehensive grammatical category of the language. This part of speech is the most constructive compared to all other categories of speech. Verb constructions have a decisive influence on noun phrases and sentences [15, p. 134]. Among the corpus of the collected material, we single out a number of new verbs, among which the processes of formation from proper names occupy a prominent place.

The appearance of homonymous formations is due to the desire of speakers to figuratively name particular phenomenon, action, to convey shades of meaning or expression, for expressing of which there are no special means in the Ukrainian literary language; the reason is also the need to break linguistic automatism. In this issue, the category of personality, structural semantic and functional stylistic aspects of homonymous formations, as well as the expression of proper names are studied.

Linguists investigating modern Ukrainian vocabulary emphasize the desire to renew and revitalize the linguistic and stylistic sphere, the effort “to move away from the canons of communication of the Soviet era in the direction of casualness, informality, of course, with the inevitable subjectivism of the speaker and doubts about the appropriateness of such changes or even acute rejection of them in certain cases from the side of the listener and reader” [24, p. 35]. According to the observations of O.O. Taranenko, one of the first noticeable manifestations of the desire to democratize the linguistic and communicative sphere, was intensification of ways of naming people [24, p. 35].

However, as evidenced by the language of modern mass media, the word-forming onymic base of such lexical units has significantly expanded, and their stylistic load has fundamentally changed.

From the corpus of collected material, we single out units derived from anthroponyms, in particular, from surnames. They became noticeably more active in the language of the Ukrainian mass media during the Russian-Ukrainian war: *Кадуров* (*Kadyrov*) – *кадурити*, *Кім* (*Kim*) – *кімити*, *Макрон* (*Macron*) – *макронити*, *Шойгу* (*Shoigu*) – *шойгувати*, etc.

кадурити – “to pass off wishful thinking”, e.g.: *We owe the word “кадурити” to the Tiktok Kadyriv soldiers, which means to pass off wishful thinking* (<https://suspilne.media>, August 03, 2022);

кімити – “to keep optimism”, e.g.: *Кімити and чорнобайти. Do you know new Ukrainian words born during the war?* (<https://day.kyiv.ua>, April 6, 2022); “*Кімити*” also has a more specialized meaning - recording cute videos while simultaneously preparing surprises for the enemy. Next, the New synonym for the phraseological unit “Step on the same rake” is ... (<https://ukr.net>, April 6, 2022); Yes, it's “*Кімити*”! With this word, we are indebted to the head of Mykolayiv OVA Vitaly Kim, who, despite everything, finds the strength to encourage the residents of the region and set them in a winning mood. His already classic greeting “Good afternoon, we are from Ukraine” even has a certain shade of *арестовлення*¹ for many subscribers (<https://shotam.info>, April 6, 2022);

макронити – “to pretend to be very worried about a certain situation, show it to everyone, but do nothing in reality”, e.g.: *He doesn't care about studies. He only макронить on this matter and that's all* (<https://2plus2.ua/>, April 1, 2022); *Ukrainians use the term “макронити”: it is a description of a person who pretends to be very concerned about something, but refuses to do anything substantial to help. Or, as one Russian-language humorous website put it, being a макронітом (macronite) means having “a special skill, a talent for building a phrase so that it starts with an insult, continues with a threat and ends with a request”* (<https://dsnews.ua>, June 24, 2022);

шойгувати – “pretend that everything is fine when it is not”, e.g.: *Шойгувати – means to pretend at the workplace that*

*everything is going according to plan. Even if everything follows a military ship*² (<https://www.rbc.ua>, March 31, 2022).

Sometimes in the language of media texts, we come across several innovations, cf.: *Макронити* and *шойгувати*. *An explanatory dictionary of Ukrainian military slang was created for English speakers* (<https://dsnews.ua>, June 21, 2022).

The creation of new verbs was caused by non-verbal factors, primarily the public actions of famous people during the war. We predict that over time, such formations will be classified as ephemerisms, that is, words widely used in certain periods in society, closely related to the activities of individual actors. In our case, innovative verbs are relevant only during the Russian-Ukrainian war. Ephemerisms are usually not included in the general fund of the language, but are used only in connection with certain events.

New verbs have entered the circulation of native speakers, which are formed from the names of types of weapons with the meaning “to destroy the enemy”, cf.:

байрактар – *байрактарити*, cf.: *It is unlikely that anyone has not heard the words “байрактарити”, “енлоїти”, “джавелініти”, “стінгерити” or “хаймарсити”, by the way, they all mean “to destroy the enemy”* (<https://suspilne.media>, August 3, 2022);

джавелін – *джавелініти*, *джавелінувати*, e.g.: *Байрактарити, as well as джавелініти, are, of course, about the destruction of the enemy* (<https://vseosvita.ua>, August 20, 2022); *The war filled our dictionaries with numerous neologisms. Some of them are obvious, such as, for example, “джавелінувати”* (<https://iantu-lviv.ua>, August 16, 2022).

With the meaning of “destroy the enemy” such innovations are used as: *хаймарсити*, *енлоїти*, *стінгерити*, cf.: *We continue to pray, хаймарсити, so that our Бавовнятко (Cotton Baby) quietly performs its work more productively!* (<https://gazeta.ua>, October 8, 2022); *For example, the word of the week can be “хаймарсити” - to destroy the command and warehouses of the Russians accompanied by a big salute* (<https://piddybny.com>, September 30, 2022); *Байрактарити, енлоїти, джавелініти: a dictionary of neologisms was created in Ukraine* (<https://loyer.ua>, July 28, 2022).

In the given meaning, Ukrainian journalists use the novelties *задрвохотити*, *затрвохотити*, cf.: *It is unlikely that anyone has not heard the words “байрактарити”, “енлоїти”, “джавелініти”, “стінгерити” чи “хаймарсити”. By the way, they all mean “to destroy the enemy”. Like, in fact, the words “задрвохотити” or “затрвохотити”* (<https://suspilne.media>, August 3, 2022).

From the proper names of the Ukrainian cities of Bucha, Gostomel, Irpin, new verbs *нагостомелити*, *відірпенити*, *чорнобайти* were formed in the meaning “to confidently and resolutely defend a particular position”, cf.: “*Нагостомелити. To defend resolutely own position. To dress down. Originates from hostilities in Gostomel*” (<https://www.pravda.com.ua>, October 23, 2022).

After the reactions of many parents to alarms and evacuations, a new verb *мамкувати* appeared, meaning “not to perform simple actions in order to save one's own life”, cf.: *Чорнобайти, дебахнілько, макронити, мамкувати, натівець - consider that such folk creativity now best conveys the majority of Ukrainians' emotions* (<https://radiotrek.rv.ua>, March 29, 2022); *The man мамкує and does not want to go to the bomb shelter* (<https://tsn.ua>, April 20, 2022).

In the language of the Ukrainian mass media, the tendency to use the verbs *волонтерити*, *наволонтерити* continues. While since 2014, the verb *волонтерити* has denoted “selfless,

¹ This new word in Ukrainian language is explained below in the article.

² “To follow war ship” is related here to famous phrase in Ukraine during the war, after sinking of the Moscow cruiser by the Ukrainian military – “Russian war ship go yourself”

voluntary and socially useful activity”, mainly as humanitarian assistance to individuals, e.g.: *The singer ONUKA also волонтерить. Ethnodiva helps raise funds for cars for volunteers, global humanitarian initiatives #standforUkraine, and also manages to наволонтерити for generators for Chernihiv* (<https://cntime.cn.ua>, April 14, 2022), in 2022-2023, emphasis is placed on assistance and acquisition of military equipment, weapons, etc. The meaning of the lexeme “наволонтерити” is given in the meaning “to collect”, cf.: *Well, tell me. Where can you наволонтерити 2 UAZ cars?* (<https://tsn.ua>, October 22, 2022); *We наволонтерили nuclear warheads. Does anyone know how to send to the front and does Nova Poshta work in Donbas?* (<https://osvitoria.media>, September 4, 2022). The indicated verb is sometimes used in titles, cf.: *Podcast “Наволонтерили”* (<https://day.kyiv.ua>, May 18, 2022).

The verb *українізувати* – “to carry out ukrainization” – is common and not new for native speakers [4, X, p. 422], but in modern texts of the media we see the verb *українити*, which indicates “an undeniable, mandatory, tough response to particular hostile actions” cf.: *The very meaning of the word українити indicates a tough response to unjustified actions* (<https://detector.media>, July 25, 2022).

Among the total of all newly classified verb lexemes, the overwhelming number has one meaning. This tendency persists in the language of both print and electronic mass media. Often in the texts of the Ukrainian media, we observe several new words in a sentence, for example: “*Українити*”, “*чорнобайти*”, “*аналоговист*”: *“АрміяInform” compiled a dictionary of military neologisms* (<https://day.kyiv.ua>, July 25, 2022); *This war also provoked the appearance of numerous neologisms and fixed expressions: чорнобайти, байрактарити, хаймарсити, кадирити, відкобзонити, to “follow the Russian ship”, etc.* (<https://media>, July 03, 2022). We will analyze some of them further in the scientific study.

In the language of the Ukrainian media, the lexeme *cyborg* is actively functioning. The “Dictionary of Foreign Words” provides the following interpretation: “artificial organism in which the physical and intellectual abilities of a person and the technical means of automation are combined” [2, p. 287]. According to O. A. Styshov, the term was metaphorized [22, p. 371]. In 2014, separatists and supporters of the so-called LPR and DPR called Ukrainian servicemen who decently defended the Donetsk airport *cyborgs*, e.g.: “*Cyborgs*” showed us all that it is necessary to fight for our land to the end - Zelenskyi. The defenders of the Donetsk airport fearlessly and indomitably showed everyone that one needs to fight for own land to the end” (<https://www.ukrinform.ua>, March 30, 2022); *In Mykolaiv, they presented the book “Life after 16:30” by Oleksandr Tereshchenko, a cyborg, defender of the Donetsk airport, ex-deputy minister for veterans' affairs. Seven years later*” (<https://www.ukrinform.ua>, October 13, 2022).

In modern media tests, the lexeme has expanded the meaning of *cyborg* – “warrior of the Armed Forces of Ukraine”, characterizing him for stability, courage, daring, cf. *Vyacheslav Zaitsev, a well-known Zaporizhian “cyborg”, historian and deputy of the city council, died in the battles for Ukraine. In Zaporizhzhia, a street was renamed in honor of the deceased “cyborg”* (<https://www.ukrinform.ua>, October 13, 2022); *Mykolaiv now has its own cyborg - General Dmytro Marchenko, who manages the defense of Mykolaiv. We all know and enjoy Vitaly Kim's video. But do not forget - the coordination of the Armed Forces, the National Guard and special services, as well as the detention of the GRUshniks of the Russian Federation in Mykolaiv –thanks to Marchenko* (<https://gazeta.ua>, March 13, 2022); *Ruslan Borovyk, a Kyivan, a grenade launcher of the 95th Brigade of the Airborne Assault Forces, a “cyborg”, a defender of the Donetsk airport, a well-known military man and a photographer, died in the battles with the Russian invaders in the east of Ukraine. This is reported by the relatives of the Hero of Ukraine on his Facebook page* (<https://portal.lviv.ua>, May 1, 2022).

Evidence that the lexeme *cyborg* is used in two meanings is an example from mass media texts, e.g.: *In the battles near Kyiv, a Ukrainian “cyborg” who participated in the defense of Donetsk Airport, Taras Koval, with the call sign “Walter” was killed. Eternal memory of the hero! His sacrifice will not be forgotten!* (<https://kyivinfo.com>, March 31, 2022).

The analyzed lexeme expands the scope of use, it is included in various names, cf.: *In the library in the village Velyka Berezovytsia, the book about the cyborg Ivan Vytyshin “My son is a cyborg” was presented. This was announced on the community page* (<https://suspijne.media>, October 24, 2022).

We observe a trend that the lexeme *cyborg* is widely used by Ukrainian journalists, although in many cases the word is presented in quotation marks, which is a confirmation of the secondary nomination.

After September 21, 2022, when the aggressor state announced “partial mobilization” in the country, the neologism *могилизація* entered the Ukrainian language, which means “deprived of any meaning the destruction of the male population of the aggressor country”, for example: *The failure of “могилизація” and the inability to provide the army with everything necessary will lead to a change in the existing regime in Russia* (<https://www.ukrinform.ua>, October 6, 2022); *Могилизація in Russia only leads to an increase in the number of their losses...* (<https://www.armyinform.com>, October 20, 2022); *“Могилизація” exhibition: the presentation of funeral equipment began in Moscow. At the exhibition, you can take a photo with a live boy in a coffin* (<https://www.lampa-news.com>, November 9, 2022); *“Могилизація” in the literal sense: one day of training, then to “close the hole” at the front* (<https://www.defence.ua>, September 26, 2022).

The use of the innovation “*могилизація*” in the language of the Ukrainian mass media emphasizes the unequivocal result of mobilization in the country of the aggressor - the loss of personnel at the front.

The lexeme *бавовна* (Eng. *cotton*) – “destroying the weapons of the Russian invaders” - acquired a figurative meaning in mass media tests. The lexeme arose as a result of the semantic transformation of the word that refers to cotton products, and based on the association with their property of being easy to ignite, it indicates the destruction of the weapons of the Russian invaders. Ukrainian researchers believe that in the headline texts the analyzed lexeme has an ironic-sarcastic sound [11, p. 62]. The update of the language unit is due to the fact that the occupiers, when reporting on explosions in the occupied territories, deliberately resorted to the substitution of concepts and used the Russian verb *хлопок*. We agree with the researchers that the shift in emphasis to the first syllable (Russian: *хлопок*) became a prerequisite for its interpretation in the Ukrainian language as cotton. The analyzed nomination reveals the peculiarities of the perception of objective facts, consolidates a stereotypical view of them, emphasizes the reader's attitude to what is reported [11, p. 62], e.g.: *In the Ukrainian information space, explosions that are heard from time to time in Russia are called бавовна* (<https://factly.com>, August 19, 2022); *Ukrainians opened the news feed after waking up and began to laugh at the first reactions to the news about бавовна in Crimea. And let it not be the burning of the Kremlin, but we have made a very good start* (<https://proslav.info>, October 8, 2022).

The corresponding process of language adaptation, in particular, the fixation in the language with a new meaning, is evidenced by the design of the lexeme with quotation marks, cf.: *In Belgorod, there is “бавовна”: locals report the “пріліт” (hit) to the oil field* (<https://umoloda.kyiv.ua>, November 6, 2022); *And again, “бавовна” came to the Russian city of Belgorod. Substation. This is already becoming a positive trend. “The regular substation in Belgorod is tired”* (<https://umoloda.kyiv.ua>, October 19, 2022); *In the Kherson region, a “бавовна” incident occurred at the occupiers' hotel* (<https://tsn.ua>, November 4, 2022).

However, among the collected material, we also record the lexeme *хлопок* as a warning about explosions, fires, e.g.: *In the Russian language, “хлопок” is an explosion, so today in Ukraine Russian messages with this word are ridiculed* (<https://news.obozrevatel.com>, September 3, 2022); *“No whistles, hits of shells or rockets were heard. Just a pair of хлопков. Only a few buildings were damaged. If you look carefully at the video and photos, you can see that the roof has not collapsed. The explosions took place inside the production workshop. The beds were not scattered* (<https://fakty.ua>, July 29, 2022).

We trace the tendency to use the lexeme *хлопок* specifically to events that take place on enemy territory, cf.: *Yesterday in Russia, there were several “хлопки” and a large-scale fire at the largest gas field in Urengoy, which will have a negative effect on the functioning of the Russian gas market* (<https://bastion.tv>, June 17, 2022); *In the Russian Federation, a strange хлопок occurred at an electrical substation in Moscow, where the lights went out in parts of the city at night* (<https://day.kyiv.ua>, November 20, 2022); *Most of the “хлопки” took place in settlements bordering Ukraine. For example, in the Russian city of Bryansk, “хлопки” are regularly heard* (<https://internetua.com>, May 6, 2022).

The collected mass media material confirms the use of the complex lexeme *термоточка* (*thermopoint*) with the meaning “fire in Russia”, cf.: *In general, термоточка is not an invention of Russian neo-language, but a completely correct term from the field of remote sensing of the earth’s surface* (<https://day.kyiv.ua>, July 24, 2022); *“Ukrainian Pravda” asked Rustam Hajiyev why namely “наляниця” became a watchword, why it is harmful to call Russians orcs, how the vocabulary of the Second World War was “deconserved” and how in the Russian “new language” explosions became “хлопки” (claps) and fires – “термоточки”* (<https://pravda.com.ua>, June 1, 2022); *It looks like it has rained, but the fact is only that there are no термоточки* (<https://detector.media>, 07/25/2022).

In modern journalistic texts, we record the lexeme *disco* – “an entertainment event held in a special club or outdoors (dance floor)”. But in the language of modern Ukrainian mass media, we fix the analyzed word in the sense of “military actions”, e.g.: *They are working on it, there is a “disco”*: *Arestovych spoke about the situation in Kherson* (<https://tsn.ua>, August 11, 2022); *Keep it up friends! 108 Separate Mountain Assault Battalion arranges discos for orcs* (<http://ca.mil.gov.ua>, September 9, 2022). Usually, the lexeme *disco* conveys the active combat operations of the Ukrainian military and failures, defeats for the invaders.

The lexeme *orc* is widely used in Ukrainian journalism, which in the first sense is considered as a fictional species or race of creatures from fantastic, mostly fantasy works. They are usually depicted as stocky barbarians with beastly features. In a figurative sense, the lexeme is used in the sense of “Russian invaders”. For example: *Since the beginning of the full-scale war in Ukraine, which began on February 24, the Russian invaders have received the call sign – orcs. Occupiers in Ukraine are disparagingly called not only by civilians, but also by high-ranking politicians in their addresses to citizens.*

The source base confirms that the analyzed lexeme is characteristic of all mass media of various forms of ownership, cf.: *In the literature, orcs were the name given to an army of mythical creatures who were hermits with low intelligence, unkempt and disorganized. Why Russians were called orcs - read in the article* (<https://www.obozrevatel.com>, March 21, 2022); *Orcs call the allegedly possible destruction by the soldiers of the Armed Forces of Ukraine of the dam of the Kakhovskaya HPP as the main reason for the “evacuation”, - the General Staff of the Armed Forces of Ukraine* (<https://kanalukraina.tv>, November 6, 2022); *Orcs in Tolkien’s fantasy trilogy are the most numerous servants of the dark lord, who make up the bulk of his armed forces* (<https://city>, November 11, 2022); *“For two and a half hours, the orcs danced above us, they thought we were all dead”, says the*

commander of the Valdemar mortar unit. In early July, he was wounded near Kharkiv. And at the end of the month, he was already at the training ground, training and going back to battle. Read and see how the Ukrainian military trains in our material (<https://city>, August 21, 22); *“In Zelenivka, there was hit to the Fariz cafe, where the orcs were having lunch, and nearby they were entrenched. People say that this has never happened before – the hit threw them all the way to the trees”, said Deputy of the Kherson Regional Council Serhii Khlan* (<https://tsn>, September 23, 2022); *On behalf of the global orc diaspora, I want to make an important request. Please don’t call Russians orcs* (<https://LB.ua>, May 25, 2022).

We agree with Ukrainianists that media sources, using the lexeme *orcs*, thus add expressions to the language, paraphrase the text, and sometimes even vulgarize it [11, p. 61], e.g.: *Pisky is another shame of the Rosarmy, or Catch up with your ship, orcs* (<https://armyinform.com.ua>, August 12, 2022); *Orcs ate kangaroos and bison* (<https://nezatin.com.ua>, November 3, 2022).

As evidenced by the corpus of collected material, the Russian invaders are also called as follows in the language of the mass media:

рашист (*rashist*), for example: *Рашист looks out the window, and there... Glory to Ukraine. Beauty in front of the Russian Embassy in Warsaw* (<https://Instagram: warszawa.life>, April 13, 2022); *Рашист complains about the powerful counteroffensive of the Armed Forces of Ukraine and wants to refuse to participate in hostilities* (<https://tsn>, October 9, 2022); *Rashists or Orcs? How it is better to call the occupiers* (<https://tsn>, June 17, 2022). We fix the adjective *rashist*, e.g.: *The occupiers began to use rashist aviation more often: the reason was named* (<https://glavcom.ua>, November 7, 2022).

русня, e.g.: *In Kazakhstan, an ad was filmed trolling русня who is kicking its heels out of the country* (Day, November 22, 2022); *This is how русня fled on a tank, that lost its people and crashed into a tree* (<https://tsn>, September 10, 2022); *Русня whines that they will be finished off. Propaganda is in a stupor. Defense of the Kremlin* (<https://day.kyiv.ua>, October 21, 2022); *Русня fled from our armed forces so quickly that it lost several soldiers* (<https://gazeta.ua>, June 24, 2022);

чмоні, e.g.: *A crowd of cosplayers joined the cause, they are already reproducing the image of “чмоні” on their own, dressing up in old rags and posing for the camera with the most ridiculous facial expressions* (<https://armyinform.com.ua>, April 1, 2022); *Who is “Чмоня”: the Horliv “killer” of the rashist military agitprop!?* (<https://armyinform.com.ua>, April 1, 2022); *Insulted Putin and deflated Russian Federation: what are the “чмоні” capable of for revenge?* (<https://ictv.ua/ua/online>, September 15, 2022); *In the Kherson region, Russian “чмоні” are surrendering en masse* (<https://pravda.if.ua>, October 15, 2022). The common name *Чмоня* for the invaders comes from proper name, cf.: *The Russian occupier Чмоня, who spent several months in Ukrainian captivity, returned home* (<https://www.5.ua>, June 29, 2022). Subsequently, in the language of the Ukrainian mass media, we come across different functions of the analyzed lexeme, e.g.: *In the TikTok social network, videos with “Чмоня” are actively created and distributed* (<https://wz.lviv.ua>, October 25, 2022);

рюзкі, e.g.: *... рюзкі come with a prohibition on Ukrainian and the imposition of the Russian language. Рюзкі come with Moscow money, Moscow ideology. Рюзкі come with the rewriting of history. And only later - in the form of bombs, as well as sadists and looters* (<https://gazeta.ua>, October 7, 2022).

We believe that the listed lexical units can be considered synonyms, cf.: *A whole list of names was also invented for the Russian military: “рашисти”, “русня”, “чмоні” - and this, apparently, is not the end* (<https://visnik-press.com.ua>, August 3, 2022).

Sometimes in media resources we record the complex lexeme *свинособаки* (*pig dogs*) to denote the Russian invaders, cf.: *Orcs, Russian Vanky and свинособаки. Why we don't call the enemy Russia and how OK it is* (<https://life.liga.net>, April 14, 2022).

Nouns to denote Russian invaders are mostly used to negatively evaluate persons who commit crimes and murders on Ukrainian territory. The authors describe the behavior and actions of enemies with disdain and sarcasm.

In the language of the Ukrainian mass media, occasionalisms formed by pure fusion function. J.V. Koloiz also calls this method of word formation a holophrase, which is also called splicing, fusion, or integration, as a result of which a word combination or a predicative unit acquires the status of a fully formed one, graphically, intonationally, and syntactically similar to a word [9, p. 117]. The lexeme *іхтамнет* formed in this way, for example: *Putin said that "there are none" – "іхтамнет"*. *This nickname with a shameful meaning began to be applied to all Russian soldiers who die in foreign wars, satisfying the criminal ambitions of the bloodthirsty Kremlin regime. Russian propaganda invented a new name for them – "hybrid heroes", but it sounds no better than "іхтамнети"* (<https://armyinform.com>, October 12, 2022). The resulting *ichtamnet* occasionalism has the meaning: "refusal of the interference of the Russian Federation in the territorial integrity of Ukraine". Subsequently, a derived lexeme of *іхтамнети* appeared: "persons who deny the interference of the Russian Federation in the territorial integrity of Ukraine and are supporters of waging war on the territory of Ukraine", cf.: *Characters of the special project "Іхтамнети", both Russian soldiers convicted of terrorism in Ukraine and their relatives, totally do not understand why they are accused of crimes against Ukraine. Simply because they do not recognize it as an independent state* (<https://detector.media>, January 13, 2022); *"Іхтамнети" on the Ukrainian border: what Ukraine can expect from the talks between Biden and Putin* (<https://www.5.ua>, December 5, 2022); *This is coffee with "іхтамнети", prepared by a Ukrainian landowner, and at the same time an Ethiopian count and marshal* (<https://uain.press.com>, October 26, 2018); *"Іхтамнети" in Donbas are trying to provoke Ukrainians according to the South Ossetian example of 2008 in order to free the hands of the Kremlin. But even in this case, it can only be about local intervention from the pirate republics, under their brand* (<https://gordonua.com>, February 27, 2022); *Let the "іхтамнети" feel in the shoes of those who had to endure and suffer from their present "absence" for eight years* (<https://day.kyiv.ua>, July 4, 2022).

The analyzed lexeme is used for the name of various projects, e.g.: *The special project "Іхтамнети" is aimed not so much at the Ukrainian but rather at the Russian audience. It is not for nothing that almost every story out of the four ends with a request from convicted Russian militants or their relatives to Putin: "Vladimir Vladimirovich! Take us away!" or "Vladimir Vladimirovich, give us our children!" respectively* (<https://detector.media>, September 6, 2022).

Occasionalisms *іхтамнет*, *іхтамнети* have a pejorative color and demonstrate the negative attitude of the authors towards those who are mentioned in the publication.

In the same way, the occasionalism *аналоговнет* is formed from the Russian phrase *аналогов нет* (*there are no analogues*), cf. *Аналоговнет. The pride of the Russian defense industry is Kamaz "Typhoon"* (<https://www.ukrinform.ua>, March 29, 2022); *At least three units of the destroyed Russian equipment on display in the city center are unique, precisely those that mean "аналоговнет"* (<https://www.ukrinform.ua>, June 27, 2022); *The Armed Forces destroy a rare Russian "аналоговнет" - the Zoopark-1 radar complex and tanks* (<https://www.pravda.com.ua>, August 20, 2022). In mass media texts, this occasionalism is mostly used in the sense of "something invented in Russia", but destroyed by Ukrainian troops.

While the analyzed occasionalisms have been used by Ukrainian journalists for years, starting from 2014, the lexeme *затридіні* - "unrealistic plans" - appeared in 2022, when the invaders' plan to take Kyiv in three days failed. E.g.: *Their plan затридіні failed, because Ukraine will never give up its territories and will stand to the last* (<https://www.proslav.info>, July 24, 2022); *Your plan is затридіні. Did you really think that you would capture all of Ukraine in three days?* (<https://www.pravda.com.ua>, April 5, 2022); *The word arose in response to the ignorant plans of the Rashists to "take Kyiv in three days". Ukraine broke these plans. And from now on, "затридіні" means unrealistic, ill-founded ideas and plans, in which a person sincerely believes, although his entire unconscious environment tries to suggest that there will be no result* (<https://www.osvitoria.com>, May 20, 2022).

In the texts of the period of the Russian-Ukrainian war, the lexeme *rashism* - "criminal chauvinist ideology of the "Russian world"" - is widely used, e.g.: *They emphasized that "rashism", "rashist" are words that are becoming increasingly more firmly rooted in our communication, but it is not completely clear what they mean. Something outdated and scary blows from them. It is not surprising, because, according to researchers, modern Russian ideology is a mixture of Nazism and communism* (<https://library.kr.ua>, September 30, 2022); *Rashism is based on the concept of "Russian world"* (<https://armyinform.com.ua>, March 9, 2022).

The lexeme *mordor* ("black country") is known as the country that existed in the fictional world of Middle-earth by J. R. R. Tolkien and was the center of power of the Black Lord Sauron. This country was located in the southeast of Middle-earth, east of Anduin. With the beginning of a full-scale war in Ukraine, Russia began to be called this token, as a terrible country-hell of ghouls, awful creatures, slaves and masters; a quasi-country of universal evil, unbearable torment and eternal terror. E.g.: *This is not footage of Mordor from "The Lord of the Rings", but the Russian shelling of Bakhmut: how the occupiers destroy the city* (<http://tsn.ua>, September 19, 2022); *Zaporozhye this morning. Russian rockets hit residential buildings. Mordor be damned!* (<https://gazeta.ua>, October 6, 2022); *The Russians destroyed and continue to shell Bakhmut so much that the city already resembles footage from a fantasy film, namely Mordor, a country that was a center of evil forces* (<https://www.pravda.com.ua>, September 19, 2022).

The combat vehicle of the Armed Forces of Ukraine in the language of the mass media was called a *бандеромобіль* (*banderomobile*) (from the combination of the proper name *Bandera* and part of the word *mobile*), e.g.: *Today in Lviv, on Rynok Square, the Car4Ukraine team of volunteers presented to the public the hundredth banderomobile equipped with an American Browning M2 machine gun. Army* (<https://www.ukrinform.ua>, September 9, 2022); *"Banderomobile" - a ZAZ vehicle equipped with guns and wheels from an off-road vehicle, destroys a column of tanks of the Russian occupiers* (<http://mezha.media>, July 2, 2022); *Recently, the 116th banderomobile went to the front line! These are combat vehicles equipped with rotating turrets. The idea of the turrets was developed by Serhiy and Oleksandr, volunteer mechanics from Radyvyliv region. The head of the Ternopil Regional Council took the "Banderomobile" and equipment for defenders to the front line* (<https://day.kyiv.ua>, July 11, 2022). Since this neologism is associated with the name of Stepan Bandera, a politician, prominent figure of the Ukrainian nationalist movement, it frightens the enemy even more, since the ideology of the liberation movement is extremely painfully perceived by the invaders. Cf.: *...The name "banderomobile" can also be attributed here - any car of the Ukrainian army. The military themselves, by the way, most often call cars at "zero" "кочу". After all, they serve for a short time and are used at full capacity. The word "zero" is a relative neologism known since 2014. It, together with the synonym "непердок", means the line of contact with the enemy. In fact, zero kilometers from the front* (<https://varianty.lviv.ua>, August 16, 2022).

Ukrainian journalists mention among new formations individuals, in particular, a *дебахнулько* - a person who, due to his interest and concern, can cause a lot of damage; *дебахнуло* is “a foolish person who puts his curiosity before safety and common sense”, eg: *Andriy is a real дебахнулько! He only makes it worse with each question!* (<https://tsn>, March 28, 2022); *Дебахнуло is an unreasonable person who puts his curiosity before safety and common sense* (<https://zaxid.net>, August 16, 2022); *Marina is such a дебахнулько! She constantly takes and uploads a photo of the hit to the house chat* (<https://proSlav>, March 30, 2022). Concerning both the mentioned innovations and other lexemes that have just entered the language of the mass media, journalists often explain their meaning to the information carriers.

The common word *град* (*hrad*) (hail), in peacetime “atmospheric precipitation in the form of ice particles of various sizes, of rounded shape” [4, II, p. 153], during the Russian-Ukrainian war is used as its own name - a 122 mm salvo rocket system, cf.: *Kharkiv was shelled at night from “Smerch”, “Hrad” and “Hurricane”* (<https://www.slovoidilo.ua>, May 20, 2022); Russian “Град” fought along the entire border, from Luhansk to Zhytomyr (<https://tsn>, February 24, 2022).

Lexeme *pixel* (shortened from English PICture’S ELeMent - image element) is the smallest unit of a digital image in bitmap graphics. In the language of modern Ukrainian mass media, a pixel is a protective (camouflage) color, which is intended to reduce the visibility of people, buildings, and equipment, due to “merging” with the color of the area through breaking the silhouette of the product or object, e.g.: *Tactical Military Suit ZZ Ukrainian Pixel* (<https://day.kyiv.ua>, October 23, 2022); *For the first time in the history of the Armed Forces of Ukraine, clothes were sewn for women serving in the army. Clothes for the military were sewn from the high-quality “pixel” that was ordered* (<https://www.pravda.com.ua>, October 23, 2022). The adjective *pixel* is common in mass media texts, it is most often used with the noun camouflage, cf.: *Pixel camouflage was developed back in the 60s of the last century in the USA* (<https://tsn>, November 22, 2022).

The lexeme *приліт*, meaning “the action with the meaning of arriving” became active during the war [4, VII, p. 659], but the neologism from the Russian language *прильот*, which means “hitting something by an enemy missile or projectile”, expanded its use. Cf.: *The occupiers shelled Kherson, there is “приліт” in the apartment* (<https://www.pravda.com.ua>, November 21, 2022); *Another “прильот” in Poltava Oblast - a missile attack on Karlivka* (<https://www.ukr.net>, May 7, 2022); *In Kovel, Volyn, there are прильоти, the city is without electricity - the mayor* (<https://glavcom.ua>, November 15, 2022); *Enemy “прильоти” in Kremenchuk again: Russian missiles hit the refinery and other infrastructure facilities* (<https://www.pravda.com.ua>, June 18, 2022).

The lexeme *тривога* (*alert*), which was used mainly in the sense of “1. Restlessness, embarrassment caused by some apprehension, fear of something, premonition of something unpleasant, dangerous; 2. Excitement, worries that disturb peace of mind” [4, X, p. 253], in 2022-2023 functions with the value “3. A condition that requires active actions; threat, danger. Conditional signal notifying about danger, threat or about battle, fight” [4, X, p.253]. Modern media usually has a clarifying version of the meaning “signal about the need to go to the shelter”, cf.: *In Ukraine, a large-scale повітряна тривога (air alert) was announced. The takeoff of fighter jets was recorded in Belarus* (<https://www.rbc.ua>, October 18, 2022); *For the second time since November 13, a large-scale тривога was announced in Ukraine* (<https://www.unian.ua>, November 13, 2022); *Warning! Тривога! There is a threat of missile strikes in Ukraine* (<https://varta1.com.ua>, November 1, 2022).

In peacetime in Ukraine, the lexeme *moped* was perceived as “abbreviation: pedal motorcycle; a light low-power motorcycle, which also has a pedal drive” [4, XI, p. 694]. With the beginning of the use of Iranian-made drones by the invaders - Shahed (“lightning” - an Iranian combat drone built according to the

“flying wing” scheme, which is produced by Shahed Aviation Industries) - have already been called *mopeds* for their disgusting sound when approaching targets, cf.: *Flying deadly mopeds. Where did the Iranian drones “Shakhed” and “Mohajer” come from...* (<https://www.pravda.com.ua>, October 6, 2022). Among the corpus of the analyzed material, we single out new complex lexemes: *shahed-moped, moped-shahed*, etc., e.g., *Why shahed-mopeds? All because of the gasoline engine, which is not equipped with a muffler. Therefore, when moving, the sound is very similar to the sound of a moped without a muffler* (<https://fastivnews.city>, October 24, 2022); *In Mykolayiv Oblast, “shaheds-mopeds” were buzzing at night* (<https://www.niknews.mk.ua>, January 2, 2023).

Modern Ukrainian journalism has been replenished with the eponymous new formation *арестовлення* – “reassuring message. A synonym for the word “бубоніння” (mumbling). A quiet voice that is difficult to hear without headphones. A reassuring appeal, a message”. The new token comes from the surname of Oleksiy Arestovych - a Ukrainian blogger, actor, political and military commentator, propagandist, columnist of Belarusian-Polish origin, organizer of psychological seminars and trainings and a charity fund for psychological support of ATO participants (2014–2017). E.g.: *Арестовлення, чорнобайти, затримки: made up on the Internet* (<https://www.volynnews.com>, August 5, 2022); *I constantly send арестовлення to my relatives* (<https://okno.unian.ua>, March 29, 2022); *Oleksiy Arestovich: “Russia could be successful. It just loses... Someone calls him their personal psychotherapist, and any reassuring message to, say, relatives - “арестовлення”* (<https://www.bbc.com>, March 29, 2022).

We record the creation of a new complex lexeme *україножер* (*Ukrainian-eater*), which is a synonym for the word *україноненависник* (*Ukrainian-hater*), “a person who has a hostile and prejudiced attitude towards Ukraine, Ukrainians, etc.”, e.g.: *How україножери mutilate the language...* (<https://gazeta.ua>, November 24, 2022).

The initiators of the Russian-Ukrainian war, Putin and Lavrov, in the language of the Ukrainian media, are called, respectively, a dwarf, “an unnaturally small person; a midget, underachiever, kutsak, kutsan” [4, IV, c.107] and a centaur, “in Greek mythology - a creature with a horse’s body and a human head and chest” [4, IV, p.140], cf.: *The Kremlin dwarf began repression against his “hebna”³ for failure in Ukraine* (<https://ukrreporter.com.ua>, March 11, 2022); *Lavrov the centaur, Putin the dwarf...* (<https://gazeta.ua>, October 23, 2022); *The Kremlin dwarf threatens with a “doomsday plane”* (<https://wz.lviv.ua>, May 7, 2022). Using the analyzed lexemes in the text, Ukrainian journalists deliberately emphasize a negative assessment of these persons, frank sarcasm.

The occasional lexeme *putler* to denote the leader of the invaders has been activated in the Ukrainian mass media, e.g.: *Cuban cartoonist Ramses Morales Izquierdo depicted how the tyrant of rashists putler resists independent control at the Zaporizhzhya NPP* (<https://wz.lviv.ua>, August 31, 2022). The designated lexeme functions as part of the names of transformed compounds, cf.: *Ukrainian director Mykita Lyskov announced the animated flash mob “Putler, Kaput” dedicated to possible scenarios of the death of Russian President Vladimir Putin* (<https://www.pravda.com.ua>, March 19, 2022).

From the lexeme *putler* (*путлер*), the adjective *путлерівський* (*Putler’s*) was formed, which is used in a number of phrases: *Putler’s troops, Putler’s regime*, etc., e.g.: *Putler’s troops implement terrorist tactics of military operations* (<https://www.unian.ua>, 10.03.2022); *Putler’s regime is a manifestation of Russian Nazism, which is based on historical myths and deranged historical consciousness* (<https://33kanal.com>, November 13, 2022).

³ derogatory term for state security personnel

Among the total new formations, we distinguish stable phrases that denote other concepts than the meaning of each individual word, e.g.:

дзеркальна тиша (mirror silence) – “combat operations”, cf.: *Russian-led terrorists do not observe a regime of complete mirror silence at the front* (<https://nzi.theukrainians.org>, September 3, 2022);

чисте небо (clear sky) – “lights out for the air alarm” or “closing air military operations over Ukraine”, cf.: *For a clean media space: “Clean Sky” Initiative...* (<https://okno.unian.ua>, February 18, 2022); *“Clear sky”*: it became known what equipment arrived in Ukraine (<https://uain.press>, October 8, 2022). It is likely that the analyzed phrase is formed from the English *Clear Sky*, cf.: *The US Air Force arrived in Ukraine to participate in the international exercises Clear Sky 2018* (<https://day.kyiv.ua>, November 12, 2022);

to start a tractor – “to use the most unexpected argument, the most unexpected means of struggle”, cf.: *Another observation, regarding the difference in mentalities: in Russian, to start a tractor is to leave the country forever. We start a tractor to steal Russian tanks* (<https://day.kyiv.ua>, March 27, 2022); *Starting a tractor is the most unexpected argument in any dialogue. The use of means of struggle that no one expected. For example, he started the tractor and started saying that he is not washing the dishes because today is Tuesday* (<https://vseosvita.ua>, August 20, 2022). The phrase is formed from a Ukrainian tractor that was pulling enemy equipment, cf.: *A Ukrainian tractor with a tank in tow became famous around the world and a meme on the Internet* (<https://focus.ua>, October 22, 2022);

tractor troops – “unexpected effective help”, cf.: *“Tractor troops” won a Russian tank. Two tractors were needed to transport Russian armor* (<https://www.unian.ua>, September 11, 2022); *In Kyiv, the “tractor troops” were immortalized: where you can see the super monument* (<https://www.rbc.ua>, November 22, 2022). The phrase with a new meaning is widely used to indicate the names of postcards, souvenirs, etc., e.g.: *The postcard “Tractor troops” has spread throughout Ukraine...* (<https://day.kyiv.ua>, August 23, 2022); *The statuette “Tractor Troops” was presented to the audience* (<https://day.kyiv.ua>, September 13, 2022);

за поребриком (over the edge) – “in Russia”, cf.: *In Ukraine, the meme also got a new form over time – “Занорберье” (“Zaporeberye”) or “за поребриком” (“behind the edge”), which is used as a mocking name for Russia* (<https://www.wiki.uk-ua>, August 16, 2022); *News of import substitution за поребриком: after a 30-year break in Russia, the production of the legendary “Mir” refrigerators has been resumed* (<https://gazeta.ua>, August 16, 2022);

to follow a Russian ship – “to run away; perish”, cf.: *Schroeder with his proposals can go after the Russian warship, - diplomat Hara* (<https://espreso.tv>, August 4, 2022); *“Following the Russian ship” - Zelenskyi about deputies absent without good reason* (<https://radiosvoboda.org>, May 3, 2022); *The Zaydis cannot find their way home and need our help. They had already been told where to go - to follow the Russian ship. However, this path is not the only one. After all, Ukrainian phraseology is so rich...* (<https://day.kyiv.ua>, September 9, 2022); *At a concert in Rome, Måneskin band frontman Damiano David emotionally sent Russian President Putin after a Russian ship* (<https://www.ukr.net>, December 29, 2022);

негативно народився (born negatively) – “died (about a Russian soldier)”, cf.: *There are thousands of those who were born negatively in Ukraine...* (<https://day.kyiv.ua>, August 23, 2022);

Bucha Massacre – “cruel military actions and torture against civilians in the city of Bucha”, cf.: *“Bucha Massacre”. Who are the first suspects and how were they found* (<https://www.bbc.com>, May 7, 2022); *“Bucha massacre”: how Russia seeks to avoid responsibility...* (<https://www.ukrinfor>

[orm.ua](https://www.ukrinfor), April 5, 2022); *“Bucha massacre”: the shot bodies of civilians lie in the middle of the streets* (<https://wz.lviv.ua>, April 2, 2022);

бучанські камі (Bucha executioners) – “Russian soldiers who abused, maimed, and killed civilians in the city of Bucha”, e.g.: *The “Bucha executioners” brigade lost more than 90% of its personnel...* (<https://www.unian.ua>, September 18, 2022);

Kobzon's concert – “the physical destruction of the Russian occupiers, and their symbolic joining to the late Russian singer. It can also be used as a threat or a curse, such as: *hurry up to go to Kobzon's concert*, cf.: *330 Russian soldiers were sent “to Kobzon's concert” in a day* (<https://novynarnia.com>, November 20, 2022); *The Armed Forces issued “tickets to the Kobzon concert” to 550 occupiers: new losses of the Russian Federation* (<https://www.unian.ua>, December 28, 2022); *Another 520 occupiers went to “Kobzon concert”* (<https://proslav.info>, December 19, 2022);

derogatory grammar of war – “we write proper names and the names of the aggressor with a lowercase letter”, cf.: *Most Ukrainian publications switched to the derogatory grammar of war* (<https://proslav.info>, December 19, 2022).

4 Conclusion

As evidenced by the collected mass media material of the period of the Russian-Ukrainian war (2022), the latest lexemes and well-known words with new meanings and fixed phrases that have acquired additional variants of meaning are widely used in the language of modern Ukrainian journalism.

In the language of the mass media, we record new verbs that are often formed from proper names, but mainly convey actions, processes, and states that are characteristic of the surnames of persons or the names of settlements.

There is a tendency among journalists to use new nouns and occasional formations. Nouns in mass media texts often acquire new meanings that are understandable only from the context.

Under the action of non-linguistic factors, a group of phrases was formed, which shape new meanings and function as stable ones.

Lexical-semantic innovations mostly give the language of the mass media a negative assessment: they convey contempt for the invaders and their politicians, emphasize their vulgarity and inability to resist the Ukrainian military and the people in general.

Some lexemes name or characterize Ukrainian figures and soldiers for their courage, stability, and confidence in their behavior.

We see the prospects of the research in a detailed study of the word-forming potential of new lexical formations, as well as in the formation of lexicographic works of neologisms and those language units that have acquired connotative meanings.

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CATEGORY OF GENRE STYLE IN THE CONCEPTUAL SYSTEM OF MODERN MUSICOLOGY

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Abstract: The problem of musical style is interdisciplinary in nature and requires a new approach. Therefore, in this study, an attempt is made to extrapolate the evolutionary-synergetic approach to the analysis of the phenomenon of musical style as an open non-equilibrium non-linear system, which allows detecting specific patterns and trends inherent in its historical development, and developing new theoretical and methodological foundations for further comprehension of the style concept. Such an approach will help, to some extent, eliminate contradictions in understanding style' essence, and present the history of musical art and musical style as a synergetic process based on the specific interaction of chaos and order.

Keywords: genre style; genre canon; primary genre system; secondary genre memory; genre semiotization; genre construction; generalization through genre.

1 Introduction

The phenomenon and concept of genre is always in the center of attention of musicologists, defining various areas of the theory of musical poetics. Research evaluations of the category of genre that reveal its transitional and integrative significance are especially relevant today, in particular in the interactions with the universal category of style, which, in particular, result in the concept of *genre style*. Acting at different stages and levels of the historical and compositional system of art, the genre style expresses the unity of artistic and linguistic means and goals of social communication, which is organized by entering the individual author's consciousness, and at the same time it helps this consciousness to express itself, preserving the situational expectations of the human community.

The phenomenon of genre style reflects the complex interaction of external and internal, societal and personal conditions, factors of artistic creativity, which requires clarification of the relevant formal and content boundaries of the artistic-linguistic continuum. This category also involves renewing consideration of the compatible-dialogical nature and artistic action of the genre-style, which represent a single process of formation and objectification of artistic thinking.

Reference to literary works (M. Bakhtin [4], V. Salimovskiy [11], V. Khalizev [6], some others), which summarize the experience of studying genre systems of literature, confirms the opinion about the mediating purpose of genre style, capable of translating recognized genre canons to the realm of individual creative consciousness, and vice versa: to stimulate the development of typical genre conditions with the author's stylistic ideas. It turns out that the genre style is positioned as a functional language style, or communicative-stylistic, has a special responsibility for the principles of systemic language organization, that is, it acquires systemic qualities already at the level of selection of artistic and symbolic means. Genre style also contributes to the stabilization of a separate genre form as a carrier of certain thematic content, communication tasks, a type of relationship, a way of characterizing reality, etc., i.e., it affects the formation of permanent semantic gradations of artistic expression.

Reference to a number of musicological works (primarily A. Amrachova [1], E. Nazaykinsky [9], V. Medushevsky [8], O. Sokolov [10], A. Sohor [13, 14], O. Samoilenko [12], and some others), made it possible to make sure that today there is no separate theory of genre style in musicology, and this can be explained by the insufficient separation of the communicative-pragmatic approach to the music-genre system. The latter involves increasing attention to the purely performing factors of

the musical-creative process from its various sides, but most of all from the speech side, thus from the side of the direct implementation of musical sound in the time and space of a certain communicative situation. The fact that with all the variety of typological approaches to music-performance interpretation, its genre (genre-stylistic) criteria remain undefined also draws attention.

The problem of genre style, in addition to the above, is borderline for genre and style theories, that is, the approach to it involves consideration and involvement of certain provisions of the doctrine of style, and it is equally important for theorists and practitioners, aesthetes and art critics, musicologists and composers, performers, and listeners. The peculiarity of the style category is that it touches on the most important aspects of the relationship between a person and the culture created by him - togetherness and separation, "indivisibility and inseparability", responsibility for what happens in the world as a meaning in itself, and vice versa, responsibility for his unique destiny as the fulfillment of the general task of "humanness", the highest essential realization of man.

2 Materials and Methods

In the course of the study, a number of mutually complementary methods were applied: comparative, used to compare performance interpretations; systemic, which allows one to imagine the processes taking place in the aggregate of genre and style models of music; culturological, used to study the phenomenon in the dynamics of the cultural-historical process.

The cultural-historical method is applied, which makes it possible to comprehend the musical style as an open system in the context of culture, that gives originality to its processes, as well as the phenomenological method associated with the possibility of comprehending the world on the basis of direct perception and used in the study of the essential manifestations of the musical style.

3 Results and Discussion

Musicology knows the possibility of a certain play of concepts, which comes from the opposition music - non-music (extra-musical), continued by "dialogical partners" content - form, style - genre, author - tradition, work - text, and some others. Confirming the universal significance of M. Bakhtin's method, the genre-style dialogue takes on a special role in relation to music, as it directly reveals the two immanent factors of poetics already specific to music, which reflect the two sides of the dialogue between music as an artistic form and culture, namely (in Bakhtin's concepts) - "authoritarianism" and "persuasiveness".

E. Nazaykinsky primarily starts from the connection of music with the context, highlighting the reliance on a specific subject and life environment in the transmission of artistic content, when music acts as an element of a larger whole, and the main information shaped during direct perception comes precisely from this "larger whole". At the same time, the specific structure of the musical text bears traces of a typical situational extra-musical complex, adopts the structure of social relations, for example dialogicity, which are removed and transformed into specific compositional musical techniques, as soon as music is removed from everyday situations. Genre applied conditions of music and its stylistic content are formed in parallel and act together, being caused by life itself, social traditions and customs. But this concerns, first of all, the primary genre system, applied genre forms that establish stylistic content within their own, quite clearly defined boundaries. E. Nazaykinsky notes that when a musical genre changes from a primary syncretic system to a secondary, purely artistic one, the memory of the primary situations is preserved, but takes on other, completely conventional forms [9, p. 106]. Unfortunately, the researcher does not explain how this happens and how secondary genre

memory is formed. But it is clear that for the secondary genre as well, firstly, it is important to define own stylistic boundaries - possibilities and programs; secondly, the communicative and associative connection with the genre situation that determines genre priorities, genre figurative content, and most importantly, such a principle of genre construction, when the pragmatics of social action is reflected, also in the case of its flow in the musical content, retains its significance in the artistic field.

Trying to distinguish the functions of the musical and non-musical components of the genre in the processes of memorization, storage, and reproduction into primary and secondary, one can come to the conclusion that in the genre form the connections between socially significant action and methods of musical expression are particularly close, and are reflected in nominative aspects of genre creation. Therefore, in the genre history of music, genre names acquire intrinsic value, which become a kind of witnesses of the musical, more broadly, artistic and social history of mankind, reflect the experience of its common existence, therefore they act as tools for the classification and typology of artistic (musical) knowledge and linguistic means of their restoration, explications.

Namely relying on genre names, finding in them also reflections of stylistic meanings, V. Zukkerman, taking into account the difference between primary and secondary genres, singles out three types of musical imagery - lyrical, narrative, and motor-plastic, associated with motor activity, thus introducing to systems of genre definitions aesthetic generic definitions of artistic thinking [15; 16].

It is noted that, if in music of an applied nature the genre acts as a certain fixed value, acquires the meaning of a canon, which ensures the reproduction of a traditional situation, then here it enters the generalizing and transforming aesthetic sphere at the same time. Thus, the genre becomes an aesthetic category - and only then can it perform artistic, musical, and meaning functions.

But genres begin to differ in expressive stylistic qualities only when they finally move to the secondary system, that is, they already enter the stylistic space of music, which is already quite free in the choice of artistic and subject matter in comparison with genre normativity. The stylistic system is opposed by the genre system of music, and at the same time it interacts with it, that collectively forms the goal system of musical thinking, which for each historical era, each direction of the development of musical art and the author is revealed in a specific and individualized context and meaning. In this broad dialogue of creative consciousness with a conglomerate of genre-style possibilities, the genre style acts as a reliable guide and categorical support of musical thinking.

Namely the genre style is relied upon, in the process of creating a musical text, both by a composer who is looking for his own style and tries out known genre forms, and a performer who strives to find his own genre coordinates in the process of interpretation, to compose a repertoire corresponding to his creative preferences, therefore he tries to master the stylistic experience of music, to cover everything musical and stylistic, hence the stylistic and linguistic musical environment.

Therefore, the genre style is the most important category, firstly, in the process of formation of the secondary stylistic system and the autonomous artistic language of music, and secondly - in the process of performance-interpretive reproduction by the performer of genre principles of musical speech as a reminder of the origin and expediency of musical meanings. Thanks to the genre and stylistic features, the performer is able to master three types of style - national, historical, and individual author's, in a completely arbitrary order. These stylistic relationships cannot be uniquely characterized by the concepts of order or hierarchy and subordination, since each of them is intertwined, and each leading genre simultaneously serves as an embodiment of the national style, the style of a historical era, and stylistic musical thinking as a whole.

In the writings of some researchers, approaches to certain genre forms are revealed as priority and historically end-to-end, that is, those that act as "long-lived", behind which the largest and most general stylistic canons that operate in all national cultures are contained, that is, they have always achieved a certain degree of 'globalization' [3; 10].

Of course, cult or ritual genres, such as prayer songs, mass, liturgy, requiem, mystery, etc., always acquire social breadth. The style and content of cult ritual music are characterized by such qualities as static, measurefulness, orderly, the dominance of the choral element, the generalization of images, the prevalence of cathedral moods, but the most important thing is that, acting as socio-canonical, these genre forms provide the initial formation of artistic canons, move to the sphere of secondary compositional and performing creativity, preserving the sacred sublimity and breadth of action.

The same can be said about popular genres: song, dance, march, chorale, declamation forms with all their varieties. For the original "simple" applied genre styles, the availability, simplicity of the musical form, the preference of familiar intonations over new ones are indicative; mainly associated with them (though not only namely with them) is the expression of genres by B. Asafyev "the intonation dictionary of the era". Their main task, if taken in the context of the historical development of musical language, is to establish a certain expressive function, artistic expression, according to a certain method of sounding. Thus, the type of melody in a lullaby, in a lament, the type of accompaniment in an urban romance, etc., arise in everyday pragmatic ways. But in this way, secondary genres are also formed, which adopt formality and figurative ambiguity, especially motivic and rhythmic constancy, primary ones: waltz, minuet, sarabande, mazurka, polonaise, romance, prelude, and some others.

Historically stable forms include larger and internally contrasting genres, which are sometimes called concert ones, thus emphasizing their belonging to the field of presented secondary music, hence their separate performance purpose. These are such well-known and globally widespread genre forms as symphony, sonata, quartet, oratorio, cantata, vocal cycle, instrumental concerto, instrumental poem.

Turning to such genres, A. Sohor notes that, despite all their diversity, they reveal common stylistic features - but precisely as genre-stylistic, that is, historically formed, canonical, programming, reflecting and preserving the artistic needs of the music itself, socialized and generalized. These features already express the methods of dialogue, communicative interaction of the composer and the performer with the surrounding environment, including the recipient environment, conditions of performance and scale of musical action, etc. Synthetic theater genres, which, according to H. Besseler, reveal the most striking type of presented secondary music, are also characterized by such properties [14].

According to the systematics proposed by O. Sokolov in the works devoted to musical genres, the main criteria for assessing the stylistic qualities of genre forms are the presence or absence of a connection of music with other arts or non-musical components, that is, the expression of the program principle as a direct involvement of verbal and literary material. On this basis, the researcher proposes to distinguish four main types of music, bringing to the fore the concept of pure music, which includes non-programmatic instrumental works, and the genre itself is essentially reduced to a stable musical structure [10].

In his assessment of the current state of the theory of genre style in music, A. Amrakhova starts from the concept of "generalization through genre" proposed by A. Alshwang, which allows characterizing the method of action of not only everyday, but also "composer" genres, even in complex synthetic forms, for example in opera creativity (albeit in a mediated form). Paying attention to the phenomenon of genre semiotization, both researchers simultaneously marked the process of generalization (abstraction) of genre features, their "distraction" in the musical

and creative imagination from the specifics of musical works, that is, they indicated that genre stylistics can exist as a set of certain logical-semantic formulas, being in the imaginary textological space of music, becoming its “common place”, which explains the specifics of the existence of autonomous artistic language of music, its own conceptual thesaurus.

A. Amrachova notes that the technique of “generalization through genre” should be considered precisely in the course of the conceptualization process; in her opinion, conceptualization, like categorization, is related to the structuring of knowledge, but “categorization” in the psycholinguistic tradition is understood as a way of establishing and expressing in language mainly hierarchical relations, such as “general – part”, “class - class member”, and conceptualization expresses a world view and world understanding, a logical structured awareness of understanding the world. Deciphering the musical content of a genre style, thus, requires a rather meticulous analysis in order to reveal its conceptual features and true semantic purpose [1].

One of the most productive provisions of the works of A. Sohor devoted to genre theory, is the identification of definitions of the stylistic quality of the genre as typified and typifying, which is based on groups of stylistic features, both structural and semantic, that is, this property is semantic in origin; therefore, the proposed concepts can be considered as genre semantems, or semantic paradigms that condition the interpretive plan of both composer and performer creativity. A. Sohor writes about the need to “make a distinction between the name of the genre and the definition of its features (sonata and sonatanness, romance and romanticism, program music and programmaticness, etc.)” as the one that most corresponds to the categorization of genre style [13, 14]. This approach to revealing the content of the concept of genre style is continued by E. Nazaykinsky, who not only devoted a separate methodical study to the problems of style and genre [9], but also formed an additional concept of genre modes, which is used in a similar way to philosophical and literary understanding, and allows revealing mobility and transitivity of genre-style characteristics, multiplicity of manifestation of genre properties, which do not negate its content integrity. In the words of E. Nazaykinsky, “a musical mode is a complete, specific in content (that is, one of many possible), artistic mediation of a state, objectified in music in various forms, by various means and methods” [9, p. 149]. Therefore, it is clear that the musical genre mode is, first of all, a semantic characteristic that allows identifying music-specific means of reproducing emotional and cognitive states, and this reveals certain psychological aspects of the stylistic content of genre forms in their concrete and pragmatic detection and definition.

According to V. Salimovsky's definition, proposed by the literary study of the nature of genres, which also seems to be very productive, the genre form can be described as the actualization of a typical author's idea by a reproduced system of cognitive-linguistic actions, the result of which are certain text units. At the same time, the typical idea corresponds to one or another goal that is included in the structure of a certain type of social activity, and dialogic relations are reflected in the genre form, since the subtextual units are the coverage of some microtheme corresponding to the expectations of the addressee, or, what is the same, a response to some genre question. Thus, from the standpoint of literary studies, genre style can be presented as functional one, reflecting the organization of speech practice; it is the interrelation of speech acts based on the interrelationship of their typical target attitudes, isolated from communicative and cognitive goals of a more general nature; precisely in this capacity, they are involved in the author's artistic ideas, giving them typicality and recognizability [11].

M. Bakhtin also addresses into the category of genre styles when he examines the system of verbal speech genres. He defines the stylistic limits of a language genre as a stable type of expression (a holistic unit of language communication, the boundaries of which are set by the change of speakers), assuming that the object of genre studies should be considered an expression (text) in its typological characteristics. M. Bakhtin insists that genre

style, like any genre-stylistic formation, is only a moment of continuous language communication (life, literary, cognitive, political), which, in turn, reflects the process of continuous comprehensive formation of this social group [4]. M. Bakhtin introduces the concept of genre style to the field of philosophy of language, which is very symptomatic of the literary studies of the first half of the 20th century, but in the study of specific genre forms, not only applied, but also artistic, he uses an analytical textological approach equipped with certain aesthetic axiological provisions.

In general, the theory of literary genres is developed on the basis of the broad direction of modern communicative and functional linguistics, and more broadly, interdisciplinary humanitarian knowledge bordering on the applied philosophical and aesthetic sphere, enriching and clarifying the latter.

Thus, studying the character of Bakhtin's worldview, V. Khalizev notes that throughout his creative career, Bakhtin develops the author's system of ethical philosophy, which is expressed in his studies of the first half of the 1920s (“To the philosophy of action”, “Author and hero in aesthetic activity”). Namely based on M. Bakhtin's dialogical philosophy, O. Samoilenko defines the main theoretical positions in the study of the dialogue between genre and style in music, as he notes that the interaction of style and “life”, cultural experience takes place in a mediated way, in which a special role is assigned to genre. Therefore, the interaction of semantics and symbolism in music can be considered as an interaction of genre and style conditions of musical creativity [6; 12].

Semantic functions of music arise as genre ones, i.e., those which are determined by the conditions of entry of the musical phenomenon into the real life context, connected with the coordination of the vital purpose and the artistic design of the musical sound. The symbolic intentions of music are manifested due to its stylistic autonomy – “self-legitimacy” - and testify to the possibility of entering the “life world of culture” into the context of a musical composition (music as a form), to the subordination of life logic to the artistic “feeling” of the world. While for the genre life is a condition of music, for style musical creativity is a condition of life, that is, life circumstances, extra-artistic representations acquire such a degree of convention that is necessary in order to use them as “signs” of other, more significant and lasting relationships. As such “signs”, life experience “asks” for a replacement - the use of more perfect and precise sign forms, another language of another reality. So, the comparative characterization of semantics and symbolism in music even in the first approach to these phenomena allows noting the different quality of genre and style conventions in music, hence the different possibilities of inter-genre and inter-style dialogues - as different directions of conventional dialogue in music.

At the same time, the possibility of forming “own” musical symbolism depends on the semantic certainty of the sonorous, “meaningful” material of music - just as the possibilities of stylistic activity of music depend on its genre design. Musical “signs” - the subject-structural ingredients of music - are dual, “two-faced”: on the one hand, they are directed to genre definitions, on the other - to the stylistic interpretation of actual and possible genre content. The first - primary - symbolic side of music indicates the metaphorical properties of sound as an image of the reality “beyond” music; the other - secondary - reveals the metonymic abilities of the sound image as a “nominee” of a new musical reality.

The genre comes into close contact with the non-musical branch of cultural symbolism, and mediates it. The primary functions of the genre were determined in that group (system) of genres, which, following H. Besseler and A. Sohor, is usually called everyday or primary (cult, applied, folklore, i.e., community-collective, often connected with oral tradition, genres). However, while the definition of “primary-genre sphere” is correct in relation to this group, limiting ourselves to the name of composer's music, that is, professional music of the New and Modern times as “re-genre” is not entirely correct. The

secondary nature of the genre forms of the composer's creativity from the end of the Renaissance to the present consists precisely in relegating the genre functions of music to the background and replacing them with "stylistic initiative", so it is more correct to speak of the "repetitive-stylistic sphere" of the evolution of music. In addition, the phenomenon of "primacy" in music turns out to be very broad, which changes historically in connection with the new possibilities of musical poetics. Starting from the 17th century, it includes stable genre-stylistic methods (typical means), rhetorical formulas, stylistic models of composer poetics, stylistic models of the national school, direction, and historical period. Even in the presence of a specific authorized primary source, the listed phenomena become the "common property" of music, its anonymous symbolic domain, the common vocabulary.

Thus, the re-stylistic sphere of music reveals its own sources of "primality" as its own intra-musical subject of dialogue, and turns them into new genre canons, subjecting them to genre "rules of conduct". The interaction of primary-genre and repeated-style signs of music explains the development of professional composer creativity, in general - the movement of music "forward" (avant-garde) with a constant connection with tradition (review of tradition, retrospectivism). This genre-style dichotomy of music is reinforced by the consideration of the categories of "primary" and "secondary" in relation to the artistic text and its compositional properties in the work of Bakhtin [4, p. 297–234].

The functions of genre, style, and composition in the process of musical influence can be considered as "memory" in connection with the genre form of music, "discovery" - in the consistent perception of the composition, "appropriation" - at the level of stylistic understanding. The central and supporting element of this triad is the composition; it is the main entrance to the musical content and the material side of the musical-creative process (the fixed symbolic side of music in its single form). At the level of the composition, "semantic coding" occurs - the process of recognizing values as a correlation between actual (immediate) sound and information stored in memory (available memory content). Semantic coding is carried out as a time process (in the time unfolding of music), but memorizing the content of music is determined not by the amount of what is heard, but by the intensity of the memorization process, which is expressed in the ability to reorder the components of the received information (to master it as a whole, endowing it with the one-moment spatial coordination in consciousness). This moment of transformation of diachronically acquired information in the process of sounding music into a meaningful vertical (into a simultaneous "space" of meaning) can be considered as the moment of the birth of a style (let us note that the stylistic assessment of music, the perception of musical sound as specific-stylistic is impossible without a listener; autonomous musical style historically also appeared when a special listening position in relation to music arose, therefore, a special listening awareness of music).

The genre consolidates the memorial aspect of culture, allows it to be defined as extremely important. That is why Bakhtin wrote that genre is more durable than style. Style accompanies the familiar experience of assigning meaning, that is, it is a mnemonic aspect of cultural memory and it reveals the aesthetic function of the latter. Style expresses an attitude, a meaningful aesthetic relationship to the past and the existing experience of musical thinking, therefore it takes on the function of evaluative generalization, assimilating certain genre indicators and giving them a new semantic interpretation, artistic and figurative direction. Special playing with style, which complicate and at the same time simplify its genre priorities, are manifested in the so-called transitional crisis periods of the development of musical art. As noted by O. Kuzheleva [7] in her research, the work of musicians of the transition period was always the most difficult for stylistic musicological evaluation, as it often embodied opposite genre and style trends. Therefore, she considers the problem of transitional time to be related to questions about current and non-current trends in style creation.

The prerequisite for the approach to the polystylistic tendencies of the composer's creativity is the formation of the principles of the "interpretive" style (the term of V. Medushevsky [8]); in it, as in a mirror, other stylistic essences can be reflected, but only reflected, used as material, being rebuilt into some kind of "incorporeal" substance by neutralization, distillation of stylistic material, for example, the unification of signs of loudness dynamics towards decrescendo, which has the meaning of a kind of afterword, "aftertone" of the era [7, p. 5–6].

Turning to the "collection of echoes", to the postlude genre, etc., the out-of-date style rejects the possibility of novelty, but at the same time, "weak", irrelevant is not only what remained in the shadow of yesterday - it is also an indication of the immanent permanent qualities, properties of music, which are its real submersion and are directed towards the future as that compatible meaningful positive principle that brings together and identifies ways of feeling and understanding.

O. Kuzheleva, in particular, proved that from the point of view of possible philological and aesthetic interpretations, the out-of-date style reveals a kind of "heuristic flavor" - primarily due to similarities with some currents characteristic of Eastern culture, in particular of Zen Buddhism. Thus, the epithet "out-of-date" emphasizes the will from temporal dependence (atemporality), therefore, from subordination to the present moment, immediate events, which creates a sense of belonging to time as eternity, without its division into the past, present, and future. The absence of temporal accentuation also implies the absence of a contrasting form, purposeful dramaturgy of the work - its orientation to the end: in "updated" dramatic concepts, time "flies" rapidly, its linearity, irreversibility are obvious. In connection with out-of-date stylistic concepts, the transformation of the temporal horizon into a spatial compositional-textural musical vertical leads to a stoppage of the linear flow of time. The emerging phenomenon of "open form", a fundamentally unfinished structure, is realized as an infinite time that repeats its own sound "landscape", becoming a metaphor for Eternity. A similar lack of temporal accentuation (atemporality) is expressed in a peculiar timeless and suprahistorical height [7, p. 6–8]. Polystylistics, in the context of the genre-stylistic approach, should be perceived as a special speech method that uses the intonation musical experience of all European (and not only European) music, which reveals the ability to exist in simultaneity, as in simultaneous-"parallel" time.

In this way, those special canonical attitudes of musical thinking are revealed, speaking of which T. Cherednychenko introduces the concept of the "primordial canon" of musical creativity, which forces one to look for genre constancy even with the most radical stylistic shifts in musical consciousness [5, p. 70]. Genres such as postlude, "post-" opuses, 'music for', reverberations, metamusic, metamorphoses, aphorisms, meditation, landscapes, dreams, reflections, labyrinths, and some others testify to the need to develop new stable genre and stylistic indicators in the conditions of total renewal of stylistic musical content, and this leads to the transformation of a number of stylistic principles into genre ones, the presentation of the stylistic principle as a canonical, generalizing one, which in the functional plan led to the complete replacement of genre conditions by stylistic ones, but left as fundamental the principle of dialogue between genre and stylistic principles in music.

Thus, the relevant aspects of the study of genre style are also due to the new experience of creating music, which is common to both composers and performers, testifies to the modern transience of musical art (the transition of centuries), evokes analogies with the transience of stylistic phenomena of music, which appeared on turn of the 19th-20th centuries.

The turning points of eras are the most important historical moments in the fate of music, including in the fate of piano performance, which allows finding chronological supports in the history of piano art at the transitions from the 18th century to the 19th century, from the 19th century to the 20th century, and finally from the 20th century to the 21st century, allows

establishing theoretical concepts of piano performance work based on these supports.

In a concise form, the theoretical model of the genre canon as a leading criterion for assessing the semantic completeness and semantic certainty of a performance interpretation can be presented as follows.

From the genre nature of musical art, the criteria of primacy - secondary are emphasized, which are system indicators not only on the border of ritual-customary and artistic practice, but also within the latter, which produces its own tendency to divide into primary and secondary material, with the proposal of paradigmatic communicative models of signs. The latter are prolonged in the system of composer-performer stylistic thinking, provoking the opposition of authority (primary genre attitude with accompanying compositional properties) - authorship (genre-stylistic modification of the chosen compositional model), i.e., they are consistent with the parameters of genre and style in the process of their translation-update in time, when the demands and needs that reflect collective creative pragmatics are organized in the genre plane, and the ambitions of the original author's artistic thinking are manifested in the stylistic dimension of musical expression. Genre canons are equally important for both architectural plans of music in its sound formation and development; they provide a dynamic balance of both plans, in which the stylistic factors of canonization confirm the semantic determination of the genre indicators of the musical composition; genre foundations of canonical musical thinking, canonization are strengthened by stylistic prolongations of compositional principles, trends of stylistic assimilation and stylistic transitivity.

Those aspects of canonical musical thinking (both composer' and performer' one) that arise from the middle of the compositional formation of musical material indicate the phenomenon of musical thematism with its aesthetic and immanent-stylistic indicators. From the point of view of general compositional logic, the spatiotemporal organization of a musical text directly depends on the principles of repetition, and the mentioned principles in the context of the process of historical and stylistic development of music can be considered as identical to the processes of thematic canonization, therefore, genre-style and stylistic canons express the objective essence of the existence of musical matter as artistically and linguistically organized.

Musical thematism, which is part of the set of musical and compositional principles, is the chronotopic-processual basis of the implementation of a genre style - a genre-style canon, which acts as a multifunctional phenomenon; the theme is a structural-semantic prototype of the genre form as a whole, therefore it determines its representative stylistic function, determines the figurative-semantic scope of the musical work, presenting one individualized image, it simultaneously (with its help) programs the artistic image unity of the musical whole.

The specificity of musical thematism appears in connection with the ability of musical expression to reproduce the forms and methods of relationships, therefore, according to the scope and nature of the thematic development, the principles of the genre-compositional constitution are divided into multi-component polylogical, monothematic-monological, contrasting-syllabic dichotomous or dialogic. All of them act as varieties of dialogic communication as a way of understanding and comprehending, influence the typology of genre canons. As determined by the performance origin of musical creativity, the latter imply three leading trends in the chronotopic (time-space) formation of musical form: polylogic, monologic, and actually dialogic as varieties of musical-performance speech - actions, achievement of the semantic addressee and work, and genre style.

Thus, the category of the genre canon allows mediating the principles and features of musical form- and meaning-making that are important for musical and performing creativity; in particular, it reveals the effective dynamic value of thematism in music as a process phenomenon that determines the typical

features of a musical composition, makes them stylistically expressed, fixed, ensures their constancy, semantic weight. Genre-canonical signs in their coordination with the stylistic indicators of musical creativity become prerequisites for the performer's attitude to the phenomenon of genre style, as well as criteria for evaluating this phenomenon as such, which is largely provided by musical-performative interpretation.

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Primary Paper Section: A

Secondary Paper Section: AL

THE FIELD OF PROFESSIONAL SKILL AS A PREREQUISITE FOR THE GENERAL DISPOSITION OF THE PROFESSIONAL TRAINING OF A MUSICIAN-PERFORMER

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Abstract: In the article, an attempt is made to outline the field of professional skills in frames of the effectiveness of professional training of musicians-performers. The pilot experiment aimed at researching the field of professional skills of university students and teachers, as well as performers who have experience both in concert and teaching activities is described. The results of experiment are presented and discussed, showing what qualities are professionally important for musicians-performers for the successful mastering of the profession and further work in a professional environment. Moreover, in particular, based on the results of the correlation and factor analysis, the conclusion is made that professional education proceeds as specified by the structure of the field of professional skill.

Keywords: artistic education; musician-performer; field of professional skill; dispositions of professional training.

1 Introduction

Higher art education is a complex system, which in current conditions requires constant improvement of all its components. All over the world, there is a noticeable tendency of decrease in the quality of higher education against the background of its "massiveness", which leads to the leveling of the level of training of specialists, that is especially evident in the field of training an "artificial product" - a musician-performer. In connection with the spread and blurring of certain professional boundaries of performing specialties, in order to successfully compete in the labor market, a graduate needs a broader training than it is required by the classic canons of the profession. His set of competencies should include best practice achievements.

In order to increase the effectiveness of a musician-performer professional training, a pilot experiment was conducted, which involved researching the field of professional skills of university students and teachers, as well as performers who have experience not only in concert, but also in teaching in the specified field.

To successfully master the profession and further work in a professional corporate environment, a musician-performer needs certain qualities that are professionally important for this specialty.

The problem of determining professionally important personality qualities is not new for psychological and pedagogical sciences. The works of such scientists as E. Zeyer, E. Klimov, A. Luk, S. Rubinstein, B. Teplov, V. Shadrikov, etc. are the theoretical and methodological foundations of research in this field. Of particular importance are the pedagogical systems of K. Stanislavskyi and M. Chekhov, which pursue the same result, but achieve it in different ways. There are also country specifics. In particular, in Ukraine, for objective reasons, the system of K. Stanislavsky is better known and widespread, however, in our opinion, the system of M. Chekhov (the path "from external to internal") for musicians-performers as for supporters of the "art of large gesture" can be even more understandable and acceptable.

The works of scientists who studied creative aspects of activity, in particular, B. Olmo, A. Luk, B. Teplov, etc., in the diagnosis of creative abilities are based mainly on the qualities inherent in the specifics of creative work. Analyzing in detail creative qualities from the point of view of thinking abilities, we believe that in the works of these scientists insufficient attention is paid to the social component of personality, which in modern conditions of globalization in all spheres of life significantly impoverishes the palette of qualities necessary for successful professional activity.

2 Materials and Methods

Analyzing the above-mentioned scientific fund and taking into account the specifics of the professional activity of musicians-performers, the professionally important qualities of musicians-performers were determined, which formed the basis of the field of their professional skill.

The field of professional skills was investigated using the "formalized interview" method, in which 262 respondents were interviewed. In the questionnaire, the interviewers recorded the following "objective" indicators: gender, age, professional status (student, teacher, artist), region, a sign of "professional gradualism" (origin from a family of creative intelligentsia, from a family of another socio-professional groups). Students, teachers of leading music universities and performing musicians working in all regions of Ukraine (Western, Eastern, Southern, Central, and Kyiv) were interviewed.

Building an adequate sample population model was not the goal of the study, however, the total number of respondents and the quality of filling out the questionnaires allow qualifying the information obtained as reliable for achieving the research goals.

The main purpose of the "pilot" study was to determine the parameters and contours of the field of professional excellence (FPE). In this regard, the following tasks were formulated: 1) to determine the structure of the field of professional expertise (excellence); 2) to reveal its main components in general and for different groups, highlighting their value in the general structure of the field; 3) to find out the general dispositions of professional training.

The basic parameters of the field are determined not only by the set of relevant components, but also by their structure - the relationship of interdependence, and the value that each component has in the structure of the field. This is a kind of "grid" in which the maintenance, establishment, and consolidation of those professional qualities that determine the nature and content of the field of professional skill of a musician-performer take place.

The comparison of FPE with a "grid" and the indication of a limited set of professional qualities are not accidental, since in this case we emphasize that the landscape of FPE contains both a "core" - a defining, root sphere, and a "periphery" - a relatively changing sphere. Separation of the "core" and "periphery" in the structure of the FPE allows recording both relatively stable, fundamental, and changing, situational components of the field. Comparing the value of these parameters in different groups will allow determining the prospects for the development and strengthening of the FPE and the main directions of professional training.

3 Results

In order to determine the structure of FPE, future musicians-performers were asked to evaluate on a 10-point scale a set of qualities that characterize the parameters of success and attractiveness of artistic activity, attractiveness of the profession as a whole, motivation of professional activity. The collected primary research material was mathematically and statistically processed: a correlation analysis was conducted and a "tree of connections" was constructed based on the Pearson coefficient (construction of a "tree of connections" - use of graph theory).

Pearson's correlation coefficient is a quantitative indicator that reflects the degree of interdependence between several variables. The higher the value of this coefficient, the more closely related these variables are. Building a "tree of connections" allows visualizing the degree of interdependence, as well as highlighting the "core" zone, that is, the highest value of the

coefficient, and the “periphery” - when the value of the coefficient is relatively small.

To distinguish the “core” and “periphery” of the professional excellence of musicians-performers, the average maximum value of the Pearson coefficient and the median (an indicator reflecting the “middle” of the correlation matrix) were determined. The value of these indicators, respectively, is as follows: average maximum – 53; the median is 32. Establishing these indicators made it possible to statistically distinguish the “core” and “periphery” in the structure of the FPE. “Core” is a sphere with a value of the Pearson coefficient no higher than 53; for “periphery”, it is not lower than 32. Signs that do not satisfy these quantitative parameters were not taken into account (with a few exceptions) during the construction of the “connection tree”.

The result of mathematical and statistical procedures is presented in Fig. 1, showing the structure of the field of professional excellence. The scheme of the “tree of connections” quite clearly represents which qualities form the “core” and which ones belong to “periphery” of professional excellence (see Figure 1).

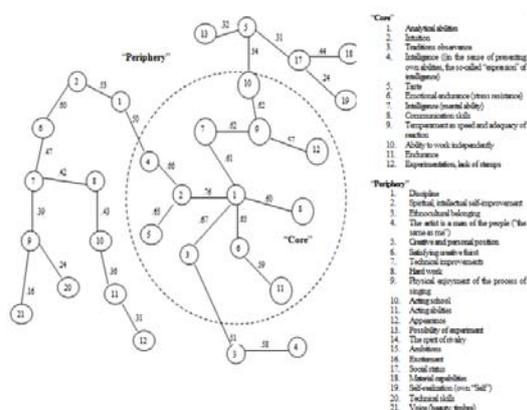


Figure 1. The structure of the field of professional excellence.

The parameters of the core and periphery outlined in the figure are not ranked: they collectively mark the “core” and “periphery” spheres.

As the “tree of connections” shows, the “core” is formed around the qualities that collectively determine the “intelligent” component of FPE. Despite the fact that both “analytical abilities” and “intelligence” are important in the structure of FPE, when we call this “core” as Smart, we do not mean only the mental component of professional skill. It is about the Mind, which:

- Is able to reflect, and not only determine, establishing and controlling already existing norms and rules; the ability to reflect is openness to experimentation, unconventional vision and performance; the ability to reflect is the presence of taste;
- Has taste, that is, is capable of feeling and appreciating what is pleasant or what brings pleasure, what is beautiful or what impresses, what is good; it is the capacity that opens access and measures the transition to consent; the presence of taste, after all, is the basis of sociability;
- Communicates, harmonizing the pleasant, beautiful, and good in itself; coordinates the efforts of communication participants to achieve agreement and understanding;
- Is emotional and adequate in terms of achieving understanding and agreement, but is not neutral and affective; its emotionality is intra-intellectual, i.e., internally characterizes it, and not super-intellectual - external and hysterical;
- Adheres to traditions, not only feeling the basis of native culture, but also the significance of world masterpieces;
- Is hardworking and ready to improve its ability to reflect, communicate, have taste, be passionate, emotional and faithful to national and world masterpieces;
- Is able to self-presenting.

In general, it is about a smart “core” as a content-generating instance. Here - in the interweaving of all the qualities outlined above - respect for the profession, professional strength, the content of professional activity are born, that is, professional excellence, which, like a root system, is able to withstand any vicissitudes of fate.

“Periphery”, on the contrary, is not content-generating, but content-derived. Indeed, both technical skills, and acting abilities, and the possibility of self-realization in spiritual and intellectual terms can remain empty qualities if they are not filled with “smart” matter. In a certain sense, the “periphery” is a kind of abstract part of the “core”, which is meaningless without the latter. The pure quality of the “periphery” would be insignificant if it were not activated by matter of the “core”, would not be reactivated in experimentation (that is, in a kind of insatiable curiosity - the desire to make everything relevant as soon as possible), ambitions, excitement, and rivalry. Of course, the existence of a “periphery” without a “core” is impossible. They are complementary: the “core” actualizes creative potential; constituents of the “periphery” are implementers of current professional expertise.

In order to confirm the conclusions regarding the “core” and “periphery”, as well as to detail the idea of the structure of the field of professional excellence, another procedure of mathematical and statistical analysis was implemented - a factor analysis was carried out.

As it is known, factor analysis is a procedure by which a large number of variables are reduced to a smaller number of independent influencing variables called factors. At the same time, one factor includes variables that are closely correlated with each other, while the variables of different factors are weakly related to each other. The purpose of factor analysis is to find such complex factors that could most fully explain the relationships between variables.

Factor analysis was performed with the same data that were previously used in the correlation analysis. During the factor analysis, 4 factors were identified.

Factor 1 is “noematic” (to designate this factor, the ancient Greek word “nus” - mind) is used. This factor unites the components that, according to the results of the correlation analysis, were placed in the “core” of the field of professional excellence.

Factor 2 – “pragmatics”, it characterizes the possibility of use and improvement of professional skills by musicians-performers.

Factor 3 – “affective”: “excitement” and “spirit of competition”, those variables (they have the highest factor load) that determine the content of this factor.

Factor 4 - “personalistic” - is characterized by the need for self-realization of musicians-performers: the affirmation of own “Self”.

Factors 2, 3, 4 actually make up the “periphery” of the field of professional skill. However, the factor analysis made it possible to detail the sphere of the “periphery” to a certain extent by distinguishing the “pragmatic”, “affective”, and “personalistic” zones in the structure of the field of professional excellence of musicians-performers.

Isolated factors, which are nothing more than separately functioning zones in the overall FPE mechanism, are useful in two planes. Firstly, in a theoretical plane, as it opens up the perspective of the study of “professional mentality”; secondly – in practical or pedagogical plane, allowing improving the program of training performers, developing separate, special methods of “strengthening” a particular zone.

The contours of the field of professional excellence outlined above - the separation of the “core”, “periphery”, as well as four zones - make it possible to determine the value of the components of this field in different groups. This analysis allows

not only to determine the strength of the FPE structure, but also to single out the groups responsible for the monolithic nature of the field, as well as to establish a kind of “weak chain” of the field - groups with a rather “loose” structure.

Let us note that the array of data allows reaching statistically justified and correct conclusions only thanks to the comparison of two groups of respondents formed on the basis of their belonging to a certain professional status group: “students” and the group “with experience” (artists, teachers). The volume of the array does not allow drawing statistically justified conclusions, comparing the values of components in student groups of different courses, as well as a similar indicator in groups “with experience” (for example, the difference in the value of teachers and artists). Conclusions may also be ill-founded when comparing groups formed on the basis of regional affiliation.

The procedure for factor analysis involves the division of factor values into percentile groups. Three percentiles were distinguished: “weak”, “medium”, and “strong” value of each factor. Combining each factor with its threefold scale of percentiles with the variable, “professional status groups – “students” and “with experience” (teachers, artists)” obtained the following result: a “strong” value for Factor 1 (“noematic”) and Factor 2 (“pragmatists”) is characteristic of the group “with experience”; “strong” value for Factor 3 (“affective”) is inherent for “students”; “strong” value for Factor 4 (“personalistic”) is equal for the groups “with experience” and for “students”. The conclusion is clearly presented in Figure 2.

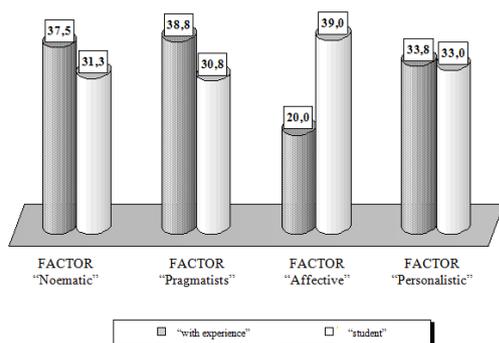


Figure 2. The strong value of the content of factors in different professional status groups (in %)

The conclusion actually indicates that for the “experienced” group, the components that form the “core” of the “professional mentality” and those components of the “periphery” that express the possibility and necessity of improving one’s professional excellence are most important. On the contrary, for “students”, the components that make up the “affective” zone of the “periphery” are of the greatest importance.

If to compare the indices that were calculated as the average value of points (on a 10-point scale) assigned to each component of the FPE, the picture will be similar. Compared to “students”, representatives of the “experienced” group attach more importance to the components that make up the “core” of FPE. For example, the “analytical abilities” index for the group “with experience” equals 7.5 units, and for “students” - 7.0 units; “intelligence”, respectively, is 8.4 and 7.8 units; “rivalry” - 4.8 and 5.8 units; “excitement” - 5.3 and 6.1, etc.

The conclusion about the “looseness” of the “core” in the student group seems banal and frivolous only at first glance. Allegedly, over time, the “core” will become stronger. However, firstly, students of music institutions, as a rule, are not debutants in their profession. They mostly have performance experience and continue to enrich it while learning. The range of questions arises: In the future, when they leave the daily care of their teachers, won’t they consolidate these “peripheral” components as the main ones in the field of professional skill? Secondly,

future musicians-performers are an integral part of the creative musical intelligentsia, while this is active part, adventurous and ambitious. Is the “experienced” part of artists, teachers in modern conditions (social, political, economic) able to cope with the approval of low requirements for professional skill - will the entire field of professional skill be impoverished?

4 Discussion

All the issues outlined above require a separate, detailed and serious study. When answering them, one should keep in mind not only the possibility of reproduction of the so-called group of “musical intelligentsia”, but also talk about the prospects of preserving and developing the intellectual fund of Ukraine.

One of the most important components of the field of professional excellence is professional education. At the same time, it should be emphasized that professional education is not a certain propaedeutics - a process of introduction to the field; and a diploma of relevant education is not a ticket that gives the right to engage in professional activities. Admission to an educational institution and the process of obtaining an education is already a fact of belonging to a professional corporation and, accordingly, being in the field of professional excellence.

Vocational education can be viewed from different perspectives. On the one hand, one can talk about what it is known and what should be known. Here, the process of training professional artists, performers appears in the guise of programs, training courses, and the degree of assimilation of the presented material. On the other hand, attention can be paid to the formation of the ability to know. Indeed, not only the desire and aspiration to enrich own spiritual and intellectual potential and improvement of “technical” characteristics (voice data and acting abilities) is significant, but also the ability to enrich oneself and improve oneself. And another aspect is the explanation of the dispositions of professional education.

We will define the disposition of professional education (DPO) of performing musicians as the structure of instructions for the educational (and self-educational) process. So, analyzing the dispositions of professional education of future musicians-performers, we are dealing with the mechanism (albeit even partial) of self-reproduction of the field in its integrity.

Thus, based on the results of the correlation and factor analysis of the field of professional excellence of a musician-performer, we conclude: *professional education proceeds as it is determined by the structure of the field of professional excellence.*

This position can be confirmed by empirical data. Thus, the respondents were asked to evaluate on a 10-point scale a set of student characteristics that are decisive for successful professional training, as well as different forms of training from the point of view of their effectiveness. The same was offered to teachers and artists. Based on the general theoretical conclusion, it was not unexpected that representatives of the “experienced” group relatively higher evaluate those characteristics that are projections of the “core” components, while “students” per contra – focus on “periphery”.

So, for example, the “intellectual level” characteristic index for the group of performers “with experience” is equal to 9.0 units, for the group of “students” - 8.7 units; “thinking”, “intuition” for the group of performers “with experience” constituted 7.5 units, for “students” - 6.8 units; “flexibility of thinking”, respectively, is 7.6 and 7.3 units; “ability to work independently” - 8.6 and 7.9 units; “ability to “finish” details” (and this is a characteristic of flexibility of thinking, hard work, perseverance, and, to some extent, stress resistance) - 7.8 and 7.2 units.

Representatives of the student group of musicians-performers rate their “appearance” and “acting abilities” higher than their mentors: 6.5 and 6.0 units for the first characteristic; 7.6 and 7.3 units - for the second.

Future musicians-performers believe that “group classes” and learning technical methods are more meaningful forms. We called this form “tapping”. The representatives of the “experienced” group value personal contact with the teacher more and see in the voice, its “technical” perfection a continuation of what we called intelligence.

During the analysis of the forms of professional education, the question arises again about the “looseness” of the “core” “noematic” zone of the field of professional excellence of future musicians-performers, about the prospects of musical and artistic skill, and more broadly - about the fate of professionalism in the environment of the creative intelligentsia.

5 Conclusion

Determining the contours of the field of professional excellence, we outlined its “core” and “peripheral” spheres, detailed the picture of the field, distinguishing four zones – “noematic”, “pragmatics”, “affective”, “personalistic”; we set the values of FPE components for different professional status groups, and considered the dispositions of professional education as an integral part of the field of professional excellence.

The statements, which were formulated as conclusions of the content order, regarding the “looseness” of the “core” sphere in the group of “students” and the probability, in connection with this, of dissemination - dispersal of the field, of course require confirmation in further research. However, this does not unify our warnings regarding the prospects for the development of the field of professional excellence, the need to strengthen it. And above all, it is necessary to pay attention to the “core” sphere of the field. After all, the erosion of the foundation, the destruction of the root is not just deprofessionalization, but it is a general lack of prospects for reproduction of professional excellence.

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Primary Paper Section: A

Secondary Paper Section: AL, AM

LANGUAGE VERBALIZATION OF QUANTITATIVENESS IN MODERN MASS MEDIA: LINGUISTIC-COGNITIVE AND COMMUNICATIVE-PRAGMATIC DIMENSIONS IN UKRAINIAN LANGUAGE

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Abstract: Quantitativeness is described in the article as a generalized linguistic concept of cognitive and communicative-pragmatic direction, which is characterized by an internal meaning structure and a system of specialized and transposed different-level linguistic means. The focus on content priority, in particular on the set of deep semantic invariants, ensured quantitativeness analysis in several aspects: 1) in view of thought-speech activity and the basic principles of functional-categorical grammar, which served as a basis for distinguishing predicative, substantive, adjectival, and adverbial quantitativeness; 2) on the axis of *quantitative certainty – quantitative uncertainty*; 3) in the context of concepts *many – few* (*багато – мало*) with their various modifications – from too much to too little quantity; 4) in the plane of the ascending or descending manifestation of the sign in one subject compared to another (others) or in the same one, but at different times, which corresponds to the pattern of *more (greatest) – less (least)* (*більше (найбільше) – менше (найменше)*); 5) with an emphasis on the totality of means of expression. Verbs, numerals and their semantic correlates, in particular nouns, numeral-noun compounds, and phraseological units are distinguished among language units with a generalized quantitativeness scheme. It was found that a significant part of these markers serves as a bright emotional expressive tool, aimed not only at verbalizing media texts, but also at expressing a mocking-ironic tone. The focus on modern language practice led to the selection of quantitatively labeled compounds associated with destructiveness. However, such violations of the language standard are recognized as justified, as they perform an important stylistic and communicative-pragmatic role. The units expressing language dynamics include spliced words, lexemes, the semantic structure of which has shifted, as well as nominations formed by morphological methods. It is emphasized that the appearance of additional negative connotations is characteristic of most of them. It is noted that the active interaction of the language of the mass media and oral communication is indicated by words of narrow stylistic purpose (with figurative meaning, jargonisms, slangisms, etc.), which explicate an indefinite amount and at the same time give general expression and a peculiar flavor to the expression.

Keywords: quantitativeness, media linguistics, cognitive and communicative-pragmatic dimensions, vocabulary, evaluative and emotional expressive means, slangisms, Ukrainian language, parts of speech, mass media.

1 Introduction

The beginning of the 21st century was marked by the rapid development of science, which led to a fundamental change of views on the object of research, intensified the use of concepts, often built at the intersection of several directions. This is evidenced, for example, by works that combine the achievements of journalism and didactics [10], philosophy and psychology [5], language and culture [13], etc. Coexistence and interweaving of different currents, activation of the synthesis of linguistic theories – cognitive, communicative-pragmatic, sociolinguistic, psycholinguistic, etc. – determined the end-to-end and multifaceted interpretation of language units. The advantages of modern linguistics include an emphasis on the priority of content and the importance of observing basic ideas based on the definition of the functional potential of words, phrases, and sentences, which should be considered in the context of specific communicative situations. Adherence to such fundamental ideas influenced the creation of works of linguistic-cognitive [6], pragmalinguistic [14], communicative-pragmatic [15], and media-linguistic [9; 15; 16] direction. These principles make it possible to objectively and comprehensively analyze language universals, usually not represented in the linguistic tradition. Recently, scientists resort to the conceptualization of certain concepts. In particular, O. Chernenko described the peculiarities of the verbalization of the concept of *любов/кохання* (*love*) [3] and offered a linguistic and phraseological interpretation of the concept of *сім'я* (*family*) [4].

Concepts of *щасття* (*happiness*) [9; 23], *криза* (*crisis*) [15], *життя* (*life*) [18], *слово* (*word*) [20], *Україна* (*Ukraine*) [21], conceptual representation of fragments of knowledge in the scientific and artistic picture of the world [11], etc. are in the field of interest of Ukrainian researchers. In a number of works, the principle of categorization is applied to the study of linguistic universals, for example, in this aspect, the semantic-cognitive paradigm of the category of femininity is considered [16]. The idea of combining categorization and conceptualization, which served as the basis for a holistic study of the sacred sphere, seems interesting [22]. The mentioned works of linguists are interesting, relevant, and capable of becoming a methodological basis for the study of other generalized concepts, in particular, quantitativeness. In modern linguistics, some of its aspects are already the object of scientific research [1; 2; 12], but they do not provide a comprehensive analysis of this linguistic universality. Quantitativeness research should be based on the modern linguistic material, in particular, media texts. Such a choice is fully justified, because newspaper journalism reflects language dynamics to the greatest extent. When informing about the realities of life, journalists often produce new works, in order to achieve the effect of unexpectedness and to implement the author's intention, they use lexemes in unfamiliar contexts. Adherence to the specified quantitative research algorithm determines the relevance of the problem.

The goal and task of the article is to characterize quantitativeness as a linguistic universal in the cognitive and communicative-pragmatic plane, which is characterized by an internal meaning structure and a system of specialized and transposed different-level linguistic means, in particular those that show signs of destructivity, aimed at making media texts colloquial, expressions of evaluation, emotionality, expressiveness.

2 Materials and Methods

The corpus of the research material consists of sentences selected from Ukrainian media publications containing words or phrases with the main or accompanying quantitative meaning. Priority is given to those language units, the activation and emergence of which are determined by the trends of modern language practice; nominations that are outside the written and literary norms of modern newspaper journalism occupy a prominent place among them. Data from the “Large Explanatory Dictionary of the Modern Ukrainian Language” [19] were included in the analysis, which contributed to the discovery of cases of expansion of the lexemes semantic structure.

Quantitativeness is chosen as the object of research as a generalized linguistic concept of cognitive and communicative-pragmatic direction. The subject of the scientific analysis is the meaning structure of quantitativeness, different-level means of its formal expression, which are considered in the context of language dynamics, evaluative and emotional-expressive load, normativity inherent in newspaper journalism and cases of its violation, and also characterized with an emphasis on foreign language factors, among which there is active phase of the Russian-Ukrainian war.

The multifaceted character of quantitativeness determined the use of the following research methods: descriptive as the main one with its inherent methods of external and internal interpretation, which made it possible to reveal the substantive and formal signs of quantitativeness in general and its internal structure in particular, to inventory and systematize language units with the main and hidden meaning of quantity; the method of complex analysis, which contributed to the study of quantitativeness not only at the deep level and in the communicative-pragmatic aspect, but also with regard to lexical, morphological, and syntactic means of expression; the method of contextual-semantic analysis, which made it possible to study

words and phrases with the main and accompanying quantitative meaning in the plane of the textual environment.

3 Results and Discussion

The study of quantitiveness as a concept that reveals a high degree of generalization involves its description with an emphasis on content priority, in particular, on a set of deep semantic invariants, structured by interconnected shades of meaning and realized at the text-creating level by a system of different levels of linguistic means. A cognitively oriented study algorithm provides quantitiveness analysis in several aspects. First, its interpretation as a linguistic universal that arose on the basis of thought-speech operations and is specified by a number of narrower categorical meanings seems to be important. The application of such a research scheme and its combination with the basic principles of functional-categorical grammar, which in the *content – form* dichotomy considers content dominant, makes it possible to determine four components in the structure of quantitiveness: predicative, substantive, adjective, and adverbial quantitiveness. Secondly, the in-depth analysis of the generalized quantitative content involves its study: 1) on the axis of *quantitative certainty – quantitative uncertainty*; 2) in the context of concepts *багато – мало (many – few)* with their modifications – from too much to too little; 3) in the plane of the ascending or descending manifestation of the sign in one object compared to another (others) or in the same one, but at different times, which corresponds to the pattern of *багато – мало (more (greatest) – less (least))*. Thirdly, an integral component of the study of quantitiveness is the description of the means of its expression, which should be considered in the aspect of modern language dynamics. The active phase of the Russian-Ukrainian war, which has been ongoing since February 24, 2022, became an external factor that influenced the neologization of the language of the mass media, the penetration into its sphere of nominations that underwent an expansion of the semantic structure, as well as lexemes that make the text colloquial, partly vulgarize it, go beyond the boundaries of normativity, serving as a means of expressing emotionality and expressiveness. Among them, quantitatively marked words occupy a prominent place, which, in addition, also have different communicative and pragmatic potential. Compliance with the specified methodological procedures will make it possible to analyze quantitiveness not only at a deep level, which indicates its universality, but also to characterize it in the context of the national specificities of the Ukrainian language in general and the language of modern media sources in particular.

Orientation on the cognitive aspect serves as the basis for determining the central component of the specified universality – predicative quantitiveness, which correlates with the predicative syntaxeme distinguished at the syntactic level. As it is known, the functional purpose of the predicate is to model the structure of simple sentences, that is, to predict the required number of substantial syntaxes needed to realize the informational completeness of the statement. In this area, there are units attached to the predicative position with a hidden and formally presented accompanying sign of quantity: verbs, as well as other parts of speech that have undergone syntactic verbalization. Among the verb forms, lexemes with the meaning of process dynamics are observed, in particular with an indication of the accumulation, quantitative growth or decrease of someone or something, etc. In the media publications of the period of the active phase of the Russian-Ukrainian war, words used in the context of military operations, the size of the Ukrainian and Russian armies, the number of displaced persons, the destroyed occupiers and their weapons, persons who are able to move freely or are deprived of it, etc., play this role. : “*Putin can double the bet on his “special operation” – what the world press writes about us* (headline) (https://gazeta.ua, May 09, 2022); *The Russian occupiers are increasing the volume of transfers of mobilized personnel, weapons and military equipment, fuel and lubricants, and ammunition* (https://gazeta.ua, December 20, 2022); *In autumn, the Estonian government was concerned that the influx of Ukrainian refugees to the country would increase due to the cold weather and constant*

Russian shelling on the territory of Ukraine (https://www.rbc.ua, January 08, 2023); *Over the past weekend, the number of Russian occupiers in the villages north of Mariupol increased* (https://glavcom.ua, February 02, 2023); *In the Zaporozhye direction, the number of three hundred” in occupiers increased”* (headline) (https://forpost.media, December 07, 2022); *Volunteers who have completed first aid courses will be brought to hospitals in the so-called “LNR” because too many wounded occupiers are arriving* (https://www.ukrinform.ua, February 13, 2023); *Currently, fewer and fewer Ukrainian refugees are arriving in Estonia...* (https://www.rbc.ua, January 08, 2023); *In particular, the Russian occupying forces restricted entry and exit from the settlement of Ulyanivka* (https://hromadske.ua, January 31, 2023); *The negative offensive continues: the cemetery of the “Wagnerivets” is growing – “an unbreakable country”* (headline) (https://www.5.ua, January 25, 2023). Constructions with quantitative-procedural predicates, such as *розвесту, наплодому, налізми, поналазуму (to breed, to fertilize, to climb)*, which serve as a bright negative evaluative and expressive tool, aimed not only at making media texts colloquial, but also at expressing irony, a negative attitude towards supporters of the Putin regime, Ukrainian officials, representatives of various structures that violate the current legislation, to the Russian occupiers, whose goal is to kill Ukrainians, destroy their cities, villages, infrastructure, etc., need special comment: *...we will win this war on the battlefield, we will defeat those Orks and Separs many of whom are bred, unfortunately...* (https://novadoba.com.ua, November 11, 2022); *Many pseudo-volunteers were dispersed in Ternopil Oblast* (headline) (https://lypa.com.ua, March 8, 2022) *The Russians “fostered” infiltration camps and prisons in Donbas: their locations were exposed* (headline) (https://gazeta.ua, June 12, 2022); *There were also guests got in the celebration of the 70th anniversary of Putin's sidekick Steven Segal, who received Russian citizenship back in 2016* (https://sport.znaj.ua, May 16, 2022); *“The main difficulty is that there are a whole heap of occupiers found their way into Ukraine, so there will be work for everyone”*, *Kuzyk noted* (https://espresso.tv, March 19, 2022). In the last sentence, in addition to the selected verb, the colloquial lexeme (*доцмобика*) (a whole heap) gives expressiveness to what is said and contributes to the looseness of the interpretation of facts. In contrast to the characterized words, the recently actualized quantitatively marked derivative *наволонтеруму (to collect much volunteer aid, volunteered)* creates a positive tone of the story. It functions in contexts about people who help the Armed Forces of Ukraine, the civilian population affected by hostilities, or coordinate the volunteer activities of others: *More than a million have already volunteered* (https://procherk.info, March 25, 2022); *In Lutsk, children volunteered 10,000 hryvnias for dry rations for defenders* (headline) (https://insider-media.net, July 21, 2022). In some places, the analyzed verb realizes an ironic and evaluative intention. In this case, the activity named by it is associated with fraudsters: *Volunteered. Law enforcement officers detained two residents of the Dnipro on suspicion of selling humanitarian aid to the military* (headline) (https://rudana.com.ua, August 17, 2022). Incidentally, we note that this lexeme is not found in printed explanatory dictionaries. We associate its formation and activation with external factors, in particular, Russian aggression. Although the noun *volunteer* is presented in one of the largest lexicographical works – the “Large Explanatory Dictionary of the Modern Ukrainian Language”, it has undergone an expansion of its semantic structure in the language of the mass media. Let us compare: *volunteer – “A person who joined the military or other public service of his own free will”* [19, p. 201] *Earlier, Petro Poroshenko together with volunteers of the Sprava Hromad NGO prepared a mobile repair shop for the military based on a British DAF truck* (https://gazeta.ua, May 02, 2023).

In addition to verbs, predicatively used numerals and their meaningful correlates take part in the modeling of quantitatively marked speech situations. Having moved into this sphere, they acquired verb categories of time, manner, as well as form, which is expressed analytically: with the help of the connection *бути (to be)* or not a proper name – the connection *виявлятися /*

виявитися, ставати / стати, становити (to appear, to become), etc. K. Horodenska also singles out such connecting elements as *досягати / досягнути, налічувати, нараховувати, сягати / сягнути (to reach, accrue, calculate, achieve)*, etc. [7, p. 100]. The analyzed syntactic derivatives occur in reports on the number of destroyed Russian invaders, their damaged equipment, wounded or dead Ukrainians. For example: *The Russians use such UAVs for reconnaissance and surveillance, as well as adjusting enemy fire, and there were many of them at the military base* (<https://focus.ua>, December 02, 2022). In newspaper publications, large indicators are often conveyed not in words, but in numbers: *the Strike Group reached at least 150 thousand* (<https://www.radiosvoboda.org>, January 15, 2023); *Ukrainian soldiers yesterday eliminated 400 occupiers, and now the number of Putin's orcs eliminated since February 26 is 44,700* (<https://fakty.ua>, August 19, 2022). By chance, we focus attention on the secondary nomination of the Russian military – the phrase *Putin's orcs*, which vividly conveys a negative attitude towards enemies.

In addition to formal expression, connective components can have a zero expression, but this does not deprive them of their ability to represent the grammatical characteristics of syntactically verbalized linguistic units with quantitative semantics. Implicitness of connections indicates the present tense and the imperfect tense: *Newly mobilized people arrive in Luhansk region from different regions of Russia. They settle in residential buildings and administrative buildings, in particular, in schools. There are a lot of them* (<https://gazeta.ua>, February 14, 2023); *Relatives of the deceased found me, thanked me for bringing their father. They said that only the photo I took was left of him. And there plenty of such stories* (<https://gazeta.ua>, July 21, 2022). In addition to definite- and indefinite-quantitative numerals, the role of functional equivalents of the verb can be performed by adjectives with an accompanying quantitative shade: *“Some territories are littered with anti-personnel mines”*: *the State Emergency Service told about the demining of Kharkiv Region* (headline) (<https://suspijne.media>, September 21, 2022).

In the hierarchical structure of the studied universal, the second place is occupied by substantive quantification, which is correlated with the substantive syntaxes presented at the semantic-syntactic level. Its formal implementation is associated with nouns, numeral-noun compounds, and other linguistic means united by the general semantics of quantity. The cognitive principle of description, as one of the priorities in our article, makes it possible to distinguish five categorically narrower meanings of substantive quantification: 1) subject quantitiveness, which implements the generalized meaning of the executor of the action, the bearer of the process or state: *More than 100 invaders went to hell – the destruction of the Russians filmed near Soledar* (headline) (<https://gazeta.ua>, January 12, 2023); – *When I resigned from the 58th brigade, of course, many of my friends remained there – that's why I helped them* (<https://novadoba.com.ua>, November 11, 2022); 2) object quantitiveness; its substantive basis is related to an indication of an object or a being to which an action, process, or state is directed: *Operators of the Special Operations Forces discovered a concentration of the enemy in several areas* (<https://gazeta.ua>, January 12, 2023); *During the day, the enemy also lost the equipment: three tanks, four armored combat vehicles and special equipment* (<https://gazeta.ua>, January 31, 2023); *More than 100 Russians were simultaneously destroyed by the Ukrainian military near Soledar* (<https://gazeta.ua>, January 12, 2023); 3) addressee quantitiveness, the functional purpose of which is to indicate the persons to whose benefit or harm the action is directed: *The heavy artillery “salute” to Putin's horde was recently handed over by the Ukrainian military, which defends the outskirts of the capital* (<https://tsn.ua>, March 25, 2022); 4) instrumental quantitiveness, usually expressed by the names of objects that serve as a means of movement or a tool for the implementation of an action: *Occupiers on tanks are moving towards Mykolaiv – ODA* (headline) (<https://www.pravda.com.ua>, March 6, 2022); *Yuriy Ignat, the spokesman of the Air Force Command of the Ukrainian Armed Forces, said that Russia is firing long-range missiles at Ukraine* (<https://tsn.ua>,

December 08, 2022); 5) locative quantitiveness, the formal representation of which involves lexemes with a spatial meaning complicated by the semantics of quantity: *Russia may launch a new offensive from the occupied Ukrainian territories in the spring, stated the Minister of Defense of Ukraine, Oleksiy Reznikov, in an interview with the BBC* (<https://www.radiosvoboda.org>, January 15, 2023); *The occupiers stop and check cars moving through the streets of Mariupol* (<https://life.pravda.com.ua>, May 04, 2022).

The semantic-cognitive paradigm of quantitiveness is complemented by its adjectival and adverbial varieties, which are correlated with adjectival and adverbial syntaxes specialized in complicating simple sentences. The central sphere of means of expressing adjectival quantification is formed by adjectives, in which the quantitative characteristics often fully realize the whole word, sometimes they are strengthened by derivational morphemes. For example: *Також виявляється, що ця установка доволі нова з маленьким пробігом* (*It also turns out that this installation is quite new with a small mileage*) (<https://gazeta.ua>, January 12, 2023) – the suffix of the subjective evaluation, which models the selected lexeme, gives it an accompanying shade of a reduced measure of quality; *У Зеленського розповіли про величезні втрати росіян під Бахмутом і Соледаром* (*Zelensky was told about the huge losses of the Russians under Bahkmut and Soledar*) (headline). *Однак Збройні сили України мужньо тримають оборону, завдаючи російським окупантам величезних втрат* (*However, the Armed Forces of Ukraine bravely defend themselves, inflicting huge losses on the Russian occupiers*) (<https://gazeta.ua>, January 12, 2023) – the epithet *величезний (huge)*, presented in the form of a non-relative degree of manifestation of the sign, besides indicating an excessive quantitative sign, fulfills a stylistic role and implements the author's intention. The message, in the verbalization of which the analyzed adjective is used, is especially important in the difficult time of aggression, because it also conveys the idea of extraordinary stability in the resistance to the invaders. In the attributive plane, there can also be combinations of words that have the meaning of quantity. Although they are subordinate to the main noun, they are not in agreement with it, so these linguistic units should be given the status of secondary: *Satellite images collected and analyzed by Maxar Technologies show a 12 km long military column moving south through the city of Velikiy Burluk in the east of Ukraine* (<https://tsn.ua>, April 04, 2022).

Adverbs with a formally presented or hidden shade of quantitiveness are specialized on expressing the meaning of adverbial quantification, for example: *The owner of a travel agency, Tetyana Potoiska-Yevchuk, organized pilgrimage tours abroad before the start of a full-scale war. And now she goes to the front line twice a week to bring the bodies of soldiers killed in battle* (<https://gazeta.ua>, July 21, 2022); *Robotic equipment, attack drones and copters help soldiers of the Armed Forces to win on the battlefield every day* (<https://gazeta.ua>, February 08, 2023). In the adverb *twice*, the semantics of quantity is explicit, but in the word *every day* it is hidden: the meaning of temporal multiplicity is conveyed holistically, by the entire structure of the word, and specified by the prepositional morpheme that is relative to the root. Means of expression of adverbial quantitiveness realize a functional potential similar to attributive components, which consists in indicating the semantic-syntactic non-elementary nature of sentences, however, they differ from them in that they are usually subordinated not to a single word, but to the entire subject-predicate structure of the sentence.

The relationship to the linguistic-cognitive aspect reveals the description of quantitatively marked language units with regard to the criterion of *quantitative definiteness – quantitative vagueness*. The productivity and multidimensionality of such an algorithm is ensured by the research of the means of expression of the indicated content nuances in the context of modern language dynamics, stylistic potential and communicative and pragmatic functions. As it is known, all types of definite-

quantitative numerals are specialized for the implementation of quantitative definiteness. Their use in the language of the mass media has never been limited, as we can see now in daily news articles about the time limits of something, the number of shelling, enemy equipment, dead civilians, destroyed buildings, destroyed occupiers, etc. The use of definite-quantitative numerals or their digital counterparts does not deprive these formal means of expressing inaccuracy, approximation. Among the modifiers of such a shade of meaning, there are linguistic units such as *near, almost, approximately, over*, etc. Let us compare: *New weapons should allow Kyiv to supplant Russia in the next three months* (<https://mind.ua>, February 16, 2023); *Petro Andryushchenko also noted that ten buses filled with occupiers drove through the city together with the trucks* (<https://zn.ua>, February 04, 2022); *Russia launched three air and three missile strikes on Ukraine during the day* (<https://hromadske.ua>, January 31, 2023); *According to the commander-in-chief of the Ukrainian forces, General Valery Zaluzhny, only in the first days of the invasion, the Russian Federation launched 113 operational-tactical land-based and sea-based missiles of the Iskander and Kalibr types at Ukrainian cities and villages* (<https://chas.news>, October 10, 2022) and *the Defense Forces eliminated almost half a thousand occupiers in a day – General Staff of the Armed Forces of Ukraine* (headline) (<https://armyinform.com.ua>, January 08, 2023); *As the adviser to the legitimate mayor of the city, Petro Andryushchenko, notes, we can now talk about approximately 30,000 occupiers in this area* (<https://zn.ua>, February 04, 2023); *More than half a thousand occupiers and a lot of equipment: updated the losses of the Russian Federation in Ukraine* (headline) (<https://gazeta.ua>, February 13, 2023). Sometimes several digital indicators are used in one statement, which serve as an important stylistic device and perform a communicative and pragmatic role. For example, such a phenomenon can be traced in the headline sentence of The Times: *every 90 meters of Ukrainian land goes to Russia at the cost of the loss of about 2,000 soldiers* (<https://mind.ua>, February 16, 2023). The juxtaposition of the relatively small extent of the occupied territory of Ukraine and the death of a significant number of invaders is aimed at achieving the author's intention. The submitted statement emphasizes the ambition of the head of the Russian Federation, his short-sightedness, the groundlessness of conducting offensive operations, and at the same time hints at the extraordinary resilience of Ukrainian soldiers who have been defending Ukraine for a year. A clear means of realizing the author's intention is the compound used to designate the Russian army, within which there is an ordinal number: *The soldiers of the "second army of the world" complain about low salaries* (<https://patrioty.org.ua>, February 16, 2023). In the given sentence, it acquires the opposite meaning in relation to how the occupying forces positioned themselves.

Orientation to modern language practice makes it possible to identify quantitatively marked compounds that indicate certain manifestations of destructiveness. However, such violations of the language standard are often justified, as they perform an important stylistic and communicative-pragmatic role. For example, the lexeme *бавовна* (*cotton*), interpreted in the "Large Explanatory Dictionary of the Modern Ukrainian Language" as "1. The same as cotton plant. 2. Cotton fiber, from which yarn is made, etc. // Threads from this fiber. 3. Fabric. 4. The basis of gunpowder for firearms" [19, p. 51], does not involve combination with proper quantitative, collective, and ordinal numerals. The arsenal of numerical names with which this noun can be syntactically related includes indefinite-quantitative and fractional numerals. The functioning of the lexeme *бавовна* (*cotton*), used in modern media texts with a completely new meaning and for the purpose of expressing irony, makes corrections to such grammatical norms. The analyzed slangism arose on the basis of associative links with the Russian abstract noun *хлопок* (*clap*), which was used by propagandists to explain explosions on the territory of the aggressor country or the occupied part of Ukraine. The creative Ukrainian people, having shifted the stress to the first syllable (*хло́пок*) and translated this lexeme into the Ukrainian language (*бавовна*), began to use it with the meaning "explosion", which made it possible to

combine the nomination *бавовна*, similar to the word *explosion*, with proper quantitative, collective and ordinal numerals: *На окупованій території в росіян сталися дві бавовни – склади підриваються і дощі, – Гайдаї* (*In the occupied territory, in Russians, there were two claps – the warehouses are still being blown up, – Gaidai* (headline) (<https://v-variant.com.ua>, December 30, 2022); *Мало хто знає, що бавовни було три – у Новофедорівці, Новоалексіївці та аеродромі Кача* (*Few people know that there were three claps – in Novofedorivka, Novoalekseiivka and Kacha airfield*) (<https://radio.nv.ua>, August 10, 2022); *Рівно тиждень назад у Криму сталася перша серйозна "бавовна"* (*Exactly one week ago, the first serious "claps" occurred in Crimea*) (<https://defense-ua.com>, 16.08.2022); *У Белгородській області вже друга «бавовна» за добу: відео масштабної пожежі* (*In the Belgorod region, it is already the second "clap" in a day: video of a large-scale fire*) (headline) (<https://tsn.ua>, August 18, 2022).

Recently, the language palette of media texts has been supplemented by derivatives motivated by definite-quantitative and ordinal numerals. First of all, it is about spliced words, lexemes, the semantic structure of which has shifted, and nominations formed by morphological methods. All of them are usually accompanied by the appearance of additional negative connotations. Among lexemes motivated by numerals, a special ironic meaning is realized by the derivative *затридні* (*in three days*) – a Ukrainian-language reaction to the aggression of the Russians, to their unfulfilled desire and unrealized plan to seize Ukraine in three days. The complex neolexeme *затридні* (*zatrydni*), written together and usually framed in quotation marks, indicates the impossibility of doing something: *People's Deputy from "European Solidarity" Oleksiy Goncharenko noted that Ukraine completely destroyed the Russians' ambitious plans for "zatrydni"* (<https://prm.ua>, June 03, 2022). The abnormal emotional and expressive form of modern language is the recently updated contaminated word *адіннарод* (*one nation – adinnarod*), which arose on the basis of a widespread narrative of Russians about the alleged fraternal attitude towards Ukrainians. The structure of this derivative contains the numeral *adin* (one, single) and the noun *narod* (nation, people) transliterated from the Russian language: *We are at war against the idea of "adinnarod", the people of which want to destroy us* (<https://wz.lviv.ua>, January 22, 2023); *"Look at the brave and hard-working people who love the Motherland and never trade their freedom for Russian fairy tales about "adinnarod", legends about delicious Soviet sausage and ice cream", the State Emergency Service emphasized* (<https://tsn.ua>, May 04, 2022). We assume that the applied derivation scheme has a short-situational appearance, but now it serves as a bright and concise means of reflecting the events and moods of today.

The slangism "two hundred", motivated by ordinal number, is leaving the limits of tolerance inherent in printed media texts. As it is known, since Soviet times, this was the name given to military personnel who died mainly during hostilities. Currently, the analyzed derivative is used to designate the destroyed manpower of the occupiers in order to emphasize contempt for them. The implementation of such a pragmatic content is also facilitated by the often used negative lexemes, such as *rashists, orks*, etc.: *"Battle through the eyes of a tank", a trophy T-72 and "two hundred" rashists: the fighters of the 92nd OMBR showed how they fight with the invaders* (headline) (<https://defense-ua.com>, May 12, 2022). The role of means of expression of insult and irony is performed by other lexemes that function along with the designation of the *two hundredth*: *All "two hundred" are representatives of the 3rd Special Guards Brigade of the Main Directorate of the General Staff. They have been sent to the most important tasks since the time of the USSR. However, this did not prevent the "elite" invaders from becoming "two hundred" and returning home in packs* (<https://patrioty.org.ua>, October 4, 2022). Having fallen into unusual contextual conditions and having acquired the opposite meaning, the adjective "elite" used in the last sentence strengthens the assessment of mockery. The descriptive construction *to return home in packs* adds a judgmental color to the given passage. By the way, we should mention that

nowadays they are trying not to use the token *two hundredth* to denote Ukrainian defenders who died defending their native land. Instead, they use the prepositional-excellent form on the *shield*, which realizes the opposite emotional and evaluative shade: *The attributes of the Soviet times are now completely inappropriate, instead, it is more symbolic to talk about the killed as those who returned "on the shield"*. This will radically change the attitude towards our fallen boys and allow them to be commemorated properly (https://tvoemisto.tv, September 01, 2022). Semantic modification is also implemented by the numeral syntactic noun *three-hundredth* to indicate the wounded: *After the Bayraktar TB2 strikes on Zmiiny, "two hundred" and "three hundred" remained on the island, the Russian Federation is preparing to evacuate them* (headline) (https://defense-ua.com, May 05, 2022).

Among neoderivatives motivated by numerals, there are composites that participate in the process of metaphorization. For example, the missile attack, which, according to Mykhailo Podoliak's assumption, could take place three times, in the message of the adviser to the head of the President's Office was given a secondary name – a *three-wave cascade*, for example: *the Russian Federation is trying to accumulate a sufficient amount of missiles to carry out a massive three-wave cascade on February 24* (headline). *On the anniversary of the war started by Russia, Russian troops can inflict a massive three-wave cascade* (https://www.0512.com.ua, February 17, 2023).

The factual material selected from printed journalism makes it possible to highlight linguistic means that express undefined quantitiveness. They include indefinite numerals and adverbs, as well as other parts of speech with additional quantitative meaning: *Russian troops completely destroyed Rubizhne. There are no surviving buildings, many buildings cannot be restored* (https://gazeta.ua, May 21, 2022); *...many units need to be withdrawn from the zone of active hostilities, stay for some time in a calmer territory and restore forces* (https://gazeta.ua, February 17, 2023); *"Wagner" is urgently training several hundred additional mercenaries from prisoners to be sent to the combat zone* (https://gazeta.ua, October 20, 2022); *During a special reconnaissance in the area of the city of Kreminna, soldiers of the SSO of Ukraine came across a concentration of enemy forces* (https://gazeta.ua, January 19, 2023); *That is why, after the fighters of the Armed Forces of Ukraine chopped up the column of attack aircraft, they began a panic attack* (https://24tv.ua, February 09, 2023); *The Armed Forces sent hundreds of occupiers to hell: the General Staff updated the losses of the Russian Federation in Ukraine* (headline) (https://www.unian.ua, December 23, 2022). Constructions in which indefinite-quantitative markers fall into an unfamiliar context require a special comment. For example: *"Let's expect that the new week will bring us new victories and many "good" dead orcs", says the deputy* (https://gazeta.ua, August 14, 2022). The semantically distant epithets "good" and "dead" in the given sentence acquired a mocking-ironic tone. In addition to these juxtaposed concepts, a considerable communicative and pragmatic effect was also achieved thanks to the use of the metaphorical noun *orcs*, which gives evaluative characteristics to the occupiers. It is used to emphasize a negative image of the actions of enemies. The proper quantitative numerals *thousand*, *million* in the plural form acquire a shade of indefinite quantification. They implement the specified semantic shade independently or in combination with other quantitative modifiers, such as *tens of thousands*, *tens of millions*. The same functional potential is realized by lexemes *thousands*, *millions* in the case of substantivization. For example: *Thousands of people are cut off from receiving qualified medical care and visiting specialists of the required profile* (https://gazeta.ua, February 17, 2023); *Tens of thousands of people were wounded and injured, millions were left homeless* (https://gazeta.ua, February 17, 2023).

The active interaction of the language of the mass media and spoken communication is indicated by figuratively used words, jargonisms, slangisms that explain an unspecified number and at the same time provide a general expression in a sentence:

According to him [the commander], the ACS already has one knocked out enemy tank and also a "bunch" of Russians (https://gazeta.ua, January 12, 2023); *A herd of katsaps was turned into minced meat: the Armed Forces of Ukraine showed how they destroy the occupiers in the south of Ukraine* (headline) (https://www.dsnews.ua, August 29, 2022), *...there are a plenty of prisoners who don't care where to go and how to fight, and there are also military personnel from the "Wagner" PMC* (https://gazeta.ua, January 12, 2023). Words of a narrow stylistic purpose, falling into media texts, mostly express contempt, anger for the aggressor. Sometimes, journalists achieve irony and negative meaning through the use of secondary nominations built on the basis of associative connections. For example, the descriptive construction *"long army of Russia"* was used to indicate the number of occupation forces: *January 2023 was a productive period for the Defense Forces of Ukraine in reducing the "long army of Russia"* (https://vechirniy.kyiv.ua, February 01, 2023). Sometimes, in order to give something a quantitative characteristic, the authors of publications resort to the use of phraseological units: *Currently, compared to the beginning of the full-scale invasion, the lion's share of missiles do not reach Vinnytsia* (https://suspilne.media, February 14, 2022). As evidenced by the corpus of factual material, nominations with a generalized indefinite-quantitative meaning mainly mark a large and excessively large number of someone or something, which is expressed by the accompanying semantic modifiers, compare: *Ukraine uses for this a relatively small number of high-precision guided weapons supported by extremely accurate artillery* (https://gazeta.ua, February 05, 2023); *There are many wounded among the discharged soldiers* (https://gazeta.ua, February 16, 2023); *According to ISW, the Russian military has already involved a significant number of its existing formations in intensified offensive operations in Ukraine* (https://gazeta.ua, February 16, 2023); *There are extremely lot of enemy attacks and shelling there* (https://gazeta.ua, February 16, 2023).

The semantics of the hidden quantity (the meaning of a part from the whole) is inherent in the group of substantive nouns in the genitive case. Linguists call them forms of quantitative object paritivity [17, p. 45]. For example: *As part of the "Emergency appeal – response to emergency situations due to hostilities in Ukraine" project, food products worth 1,000,000 euros were purchased* (https://caritas.ua, May 12, 2022). Indefinite-quantitative content is realized by nouns used in the plural and other substantive words and loses it in case of combination with definite-quantitative numerals, as well as when functioning in the singular. Let us compare: *the Russian occupiers continue to focus their main efforts on conducting offensive actions in the Kupyansk, Lyman, Bakhmut, Avdiivka and Shakhtar directions* (https://gazeta.ua, February 17, 2023); *"Two occupiers did not wait for dawn": SBU showed the work of snipers of special unit "A"* (headline) (https://novynarnia.com, November 11, 2022); *The occupier, who wanted mass murders of Ukrainians, spoke about negotiations* (headline) (https://www.unian.ua, February 16, 2023). In some cases, there are forms with inconsistent semantics and a morphologically expressed numerical sign. Such nominations denote the totality of someone, that is, they implement an unspecified number, but have the singular form: *Soldiers of the Special Operations Forces of Ukraine showed on video how they masterfully eliminated the enemy* (https://gazeta.ua, January 19, 2023). A close functional range is inherent in secondary nominations, the modeling scheme of which is the singular names of non-beings → nominations of an indefinite number of people, for example: *the Kremlin has already realized that it will not be possible to completely seize our state, so it wants to implement the "Korean scenario"* (https://gazeta.ua, February 16, 2023); *Peskov stated that the main task of the Minsk agreements was "to force Kyiv to fulfill its obligations"* (https://gazeta.ua, February 16, 2023); *Ukraine will definitely win the war* (https://gazeta.ua, February 14, 2023). Secondary names of this type are based on lexical-semantic transformation and make it possible to effectively and quickly, due to the minimization of language resources, provide information, in particular, information related to unmarked quantitative characteristics.

In the media space of the period of the Russian-Ukrainian war, linguistic units, united by the general idea of quantitiveness, are capable of expressing an ascending or descending manifestation of a quantitative feature. It is about graduated forms *більше (найбільше) – менше (найменше) (more (most) – less (least))*. Comparatives *more, less* are often accompanied by denominator derivatives such as *twice, three times*, which add a touch of definiteness, and the words *more, everything: There are more enemy planes* (<https://gazeta.ua>, February 16, 2023); *Since February 24, supporters of gun ownership have doubled* (headline) (<https://fakty.com.ua>, June 23, 2022); *Even more American tanks on the way to Bremerhaven* (<https://gazeta.ua>, February 17, 2023); *Despite the fact that Russia has fewer and fewer modern missiles every day of the war, Ukraine's need for such systems remains* (<https://www.president.gov.ua>, June 14, 2022); *There are fewer and fewer of them. Ukrainian defenders killed more than a thousand occupiers in the past day* (headline) (<https://bigkyiv.com.ua>, February 18, 2023); *But there are many times less people willing to buy real estate* (<https://gazeta.ua>, February 17, 2023). This group includes compounds (*не*) *більше (більш) як, (не) більше (більш) ніж, (не) менше (менш) як, (не) менше (менш) ніж (not) more (more) than, (not) more (more) than, (not) less (less) than, (not) less (less) than*): *The cost of the "order" was more than half a million in hryvnia equivalent* (<https://gazeta.ua>, February 17, 2023); *"The number of people staying in Bakhmut should be reduced to a minimum. Currently, there are less than five thousand of them"*, *Kyrylenko said* (<https://gazeta.ua>, February 14, 2023). The process of growth of an undefined amount of something is achieved thanks to the repetition of the word *more*, and its decline is realized by the compound *fewer and fewer*. Let us compare: *More and more Western-style equipment, equipment and weapons are arriving in Ukraine* (<https://gazeta.ua>, February 17, 2023); *"That's why, I think, Putin's trump cards are getting fewer and fewer every day"*, *Zhdanov concluded* (<https://kanal.com.ua>, June 22, 2022).

4 Conclusion

Thus, quantitiveness is a generalized linguistic concept of a cognitive and communicative-pragmatic direction, which is characterized by an internal meaning structure and a system of specialized and transposed different-level linguistic means. Orientation on content priority, in particular, on a set of deep semantic invariants structured by interrelated content nuances, provides quantitative analysis in several aspects: 1) in view of thought-speech activity and the basic principles of functional-categorical grammar, which serves as the basis for the selection of predicative, substantive with five categorically narrower meanings (subject, object, addressee, locative and instrumental), adjective and adverbial quantitiveness; 2) on the axis of *quantitative certainty – quantitative uncertainty*; 3) in the context of concepts *many – few* with their various modifications – from too much to too little; 4) in the plane of the ascending or descending manifestation of the sign in one subject compared to another (others) or in the same one, but at different times, which corresponds to the pattern of *more (greatest) – less (least)*; 5) with an emphasis on the totality of means of expression. Verbs, numerals, and their semantic correlates, in particular nouns, numeral-noun compounds, and phraseological units belong to linguistic units with a generalized sense of quantitiveness. A significant part of these markers serves as a bright emotional and expressive tool, aimed not only at making media texts colloquial, but also at expressing a mocking-ironic tone. Orientation to modern language practice determines the distinguishing of quantitatively marked compounds that indicate certain manifestations of destructiveness. However, such violations of the language standard are often justified, as they perform an important stylistic and communicative-pragmatic role. Among the units that express language dynamics, there are spliced words with a transliterated part, lexemes, the semantic structure of which has shifted, as well as those formed by morphological methods of nomination. All of them are usually accompanied by the appearance of additional negative connotations. The active interaction of the language of the mass media and spoken communication is indicated by words of narrow stylistic purpose (with a figurative meaning, jargonisms,

slangisms, etc.), which explain an indefinite number and at the same time give the phrase a general expressiveness and a peculiar flavor.

We see the prospect of further research in a comprehensive description of other language universals, for example, possessiveness.

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INFORMATION AND PSYCHOLOGICAL OPERATIONS (IPSO) AS A DISCOVERY OF FALSE NARRATIVES IN THE CONDITIONS OF MILITARY CONFLICT IN THE MEDIA

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Abstract: The article examines the information and psychological operations (IPSO) promoted by Russia in the media space through social networks and traditional mass media since February 24, 2022. The scientific analysis includes the advice of media experts, practicing journalists, fact-checkers, and military psychologists on countering various manifestations of the IPSO, and through them, false narratives in the conditions of information warfare. The material was selected by the method of continuous examination of social networks Facebook, Instagram, Twitter, as well as such anti-fake resources and fact-checking projects as NotaYenota, "Brekhnunetz", "Media Detector", "BezBrehni", "Filtr", "Russian fake, go to...", media research of the public organization "Information in Its Pure Form". First of all, the modern media space was examined in order to identify in it the IPSO conducted by Russia in the conditions of the information warfare. It was noted that the activation of the IPSO with the start of a full-scale invasion took place instantly, because the enemy took advantage of the information vacuum in which the Ukrainians fell in the first days of the war due to a lack of understanding of what was happening. The characteristics of typical signs of hostile IPSOs are given, in particular the following: the presence of a bot author or Internet troll; formation of mass despair; patriotic symbols or slogans as an element of cover; intentional division of Ukrainians into "us" and "them"; creating a deceptive effect about the extraordinary power of the enemy; reconnaissance of data that may be useful to the enemy; the use of esotericism; an anti-moral call for the cruelest revenge; excessive emotionality of the texts and call to action; appeal to the individual as a persuasive argument; demanding a quick response to messages; devaluation of official sources of information and involvement of pseudo-experts; discrediting Ukraine in the international arena. It was found that the synchronicity of publications, as well as factual, logical, language errors, and the unreality of the so-called authors of such material are also markers of IPSO. The differentiation of the most common types of IPSO and their transformation in Ukrainian domestic media were studied, along with effective ways of resisting false Russian narratives, forming critical thinking and media literacy when perceiving heterogeneous information content.

Keywords: information and psychological operations; military conflict; media; Russian narratives; content; communication.

1 Introduction

Since the beginning of the Russian-Ukrainian war, Russia is trying to fight not only on the battlefield, but also looking for various means of psychological pressure on Ukrainians in order to undermine their fighting spirit, 'teach' them to pessimism, instill despair and hopelessness and, as a result, shake the situation inside the state, suggest the inevitability of its defeat, etc. Information leaks are aimed at demoralizing the Ukrainian people, creating an atmosphere of doom, hopelessness, and panic, the main task of which is to discredit the leadership of the Ukrainian state, its allies, the Armed Forces of Ukraine, and demonstrate their inability to wage an active and productive fight against the enemy. Recently, a lot of messages have appeared in various social networks that have a significant communicative and pragmatic effect and influence the reader. The specified objective factors became a prerequisite for raising the issue of information hygiene, psychological safety of Ukrainians, effective resistance to enemy propaganda and manipulation. Understanding all the consequences of informational and psychological operations, the ability to recognize them and resist them will not only ensure a relatively stable emotional state of Ukrainians, but will also be a reliable protection and one of the prerequisites for Ukraine's victory in the war.

In the modern scientific paradigm, there are many works devoted to revealing the peculiarities of informational and psychological

operations and describing them in an interdisciplinary context. Researchers have repeatedly involved the achievements of sociology, psychology, psycholinguistics, mediallynguistics, clarifying the mechanisms of interpretation and perception of the same events in different aspects and in the plane of hidden content. First of all, it is about false Russian narratives aimed at provoking internal discord among Ukrainians and justifying Russia's actions. Non-military means of conducting a hybrid war, mechanisms of cognitive influence and communication were in the field of vision of H. M. Yavorska, who believes that "wars are inseparable from verbal, discursive practices" [22, p. 55]. O. S. Snytko and G. Kononykhina characterized the modern information and psychological war in the context of projects of total social zombification in the media space [19]. S. V. Nesterenko presented a thorough analysis of information and psychological operations, the scope of the manifestation of which is social networks. The researcher included the use of evaluative vocabulary and means aimed at arousing the emotional state of the listener or reader, carrying out a psychological attack on him, etc., to the methods of conducting information wars used by modern specialists [12]. N. V. Slukhai described in detail the system of various language units that make it possible to implement the negative intentions dominant in the Russian media space. Among them: 1) the intention to humiliate the dignity of the speaker of the Ukrainian language, connected with the use of transliterated and distorted Ukrainian expressions, which gives the narrative irony, realizes insult and contempt; 2) grammatical and lexical markers aimed at expressing the inferiority of Ukrainians; 3) the use of a lowercase letter instead of a capital letter when it comes to proper names related to Ukraine, and, vice versa, writing common names with a capital letter when the information concerns Russian realities and objects. According to N. V. Slukhai, markers of the intention to simplify and establish perception, which occurs with the help of resources from previous ideologized eras or ideological clichés, play an equally important role in the implementation of informational and psychological influence. Such means imply the activation of expressions of the Soviet era, inclusion to the use in language and the repetition of phrases that justify Russian aggression against Ukraine, etc. A separate group of intentions described by the researcher are those that mark the growth of evil, predict the allegedly terrible future of Ukraine, are aimed at disorientation, suggest chaos, etc. [18, p. 361–397]. The relationship to the raised problem is revealed in the works that deal with fakes and various manipulations which serve as a powerful tool of information warfare. Relevant ones are studies in this direction conducted by M. Kitsa [5], I. Mudra [11], N. Nikolayenko, Y. Vasylevich, and O. Komarchuk [13], I. Puciata [17], and others. These works are devoted to the description of fakes and other means of informational and psychological operations carried out by the Russian Federation in relation to Ukraine since the occupation of Crimea and part of Donbas, but do not cover the period from the full-scale invasion of the Russians. Modern military realities have become a prerequisite for the fact that the use of information and psychological operations has gained even greater momentum, because the manipulation of public opinion is no less important form of war than war on the battlefield with the use of firearms. The problem of the use of communication technologies of Russian propaganda in the Ukrainian media, which in terms of time parameters coincide with active military operations, is partially reflected in modern linguistics [6, 7]. Fundamental ones in this regard are studies that directly relate to the specifics of the creation, functioning, and dissemination of information and psychological operations (IPSO) in the media space in the conditions of a military conflict. In the publication of Ya. Bedriy, it is noted about the manifestations of the Russian IPSO and how to deal with them [1]. E. Derevyanko generally writes about IPSO in the Ukrainian infospace [3], and I. Zolotukhin analyzes the network sphere of dissemination of information and psychological operations [23]. N. Lavrynets examines information operations from the point of view of

psychology, gives sound advice on how not to succumb to enemy provocations during wartime [10]. The correspondent of "ArmyInform" A. Pecherskyi analyzes in detail the rashists' IPSO in the media sphere [14–16]. In addition, in our opinion, an emphasis on the system of productive means of countering informational and psychological operations is important, among which speeches by authoritative persons during the Russian-Ukrainian war that began in February 2022, in particular, the President of Ukraine, his advisers, political and military analysts etc. are quite frequent. Scientists resorted to the analysis of printed and oral speeches, occasionally paying attention to their somewhat opposite rhetorical plan – from worried-pessimistic to soothing-victorious [7]. The analyzed works undoubtedly show that informational and psychological operations and the detection of false narratives are an important object of research, which has repeatedly been in the field of view of scientists. At the same time, since a full-scale invasion, the enemy does not stop using various information technologies, seeking to impose false information and gain victory in the media sphere. In view of this, we consider the multidimensional description of informational and psychological operations aimed at the detection of false narratives in the conditions of a military conflict to be an important and relevant issue that requires detailed study.

2 Materials and Methods

The material of the study contained the examples of IPSO, which is promoted by Russia in the media space through social networks and traditional mass media since February 24, 2022. The scientific analysis includes the advice of media experts, practicing journalists, fact-checkers, and military psychologists on countering various manifestations of the IPSO, and through them, false narratives in the conditions of information warfare. The material was selected by the method of a comprehensive examination of the Facebook social network, as well as such anti-fake resources and fact-checking projects as NotaYenota, "Brekhnets", "Media Detector", "BezBrekhni", "Filtr", "Russian fake, go to...", research of the public organization "Information in Its Pure Form".

The methodology of the analysis of information and psychological operations in the media provided for the step-by-step application of both general scientific and special methods and approaches, which made it possible to achieve a research result. At the first stage, a comparative analysis of scientific intelligence and journalistic publications on the studied problem was carried out. The second stage provided for a direct study of the media space on the basis of systemic and structural-functional approaches to IPSO as a complex technology of information warfare. The analytical-synthetic method, as well as methods of comparison and analogy, a special method of fact-checking provided an opportunity to compare the methodological concepts of the essence of IPSO, to reveal the peculiarities of their aspects in order to reduce the negative impact on the Ukrainian domestic audience.

The article analyzes information-psychological operations (IPSO) as a manifestation of false narratives in the media in the conditions of the Russian-Ukrainian war. Among the completed tasks, we draw attention to the following: examination of the modern media space in order to identify IPSO in it, which is conducted by Russia in the conditions of information war; characteristics of typical signs of hostile information operations, areas of their distribution and effective ways of minimizing negative impact; differentiation of the most common types of IPSO and their transformation in Ukrainian domestic media; effective ways of resisting false Russian narratives, forming critical thinking and media literacy when perceiving heterogeneous information content.

3 Results and Discussion

Russia began to conduct active informational and psychological operations aimed at Ukrainians in 2004–2008, and the open phase of informational influence was observed during the Revolution of Dignity and the annexation of Crimea.

With the beginning of a full-scale invasion, the invading country intensified psychological pressure on Ukrainians in order to cause panic and achieve victory as soon as possible. After all, it is clear that when the enemy fails to do what he wants on the battlefield, he begins to fight with the help of fakes, manipulations, and propaganda, through which he broadcasts informational and psychological operations as a manifestation of false narratives. The key message to which the negative Russian information and psychological actions lead is that the Ukrainian authorities and the Armed Forces are allegedly powerless against the Russian invasion.

IPSO (a somewhat modified variant of the concept of Psychological Operations, PSYOPS) today is usually understood as coordinated activity in the communicative space with the aim of influencing the mood in society. The terms "psychological operation" and "military information operation" are also used to denote this concept. These are certain planned actions through which disinformation and influence on the opinion of a certain group of people are carried out. Today, this term is mostly used in the context of the Russian-Ukrainian war. After all, IPSO can be equated to a kind of information weapon used by the Russian side to propagate its own false narratives, to manipulate the mood of the population in free or occupied territory. Among the elements of IPSO, such ones as fakes, propaganda, disinformation, exaggeration or understatement of certain information, bot cyberattacks are distinguished [1].

The armed forces of various countries, in particular, the USA, Ukraine, Russia, and other countries are engaged in this type of psychological operations. IPSO is used in peacetime and wartime. Today, during the war, the main goal of the Russian IPSO is to create optimal conditions for the invaders to capture Ukrainian territories, that is, to do everything to sow panic among Ukrainians, to intimidate, in order to reduce resistance to the Russian invaders. An important goal of information operations, which have a psychological basis, is the division of society, the undermining of trust in the leadership of the state and the Armed Forces of Ukraine, and the demoralization of the people. Rocking the psyche, influencing the mood of the people, their emotions, discrediting the allies are the components of IPSO that arose after a full-scale invasion.

Careful monitoring of such social networks as Facebook, Instagram, and Twitter during the martial law in Ukraine makes it possible to identify the most common techniques of enemy IPSOs, as well as to investigate the false narratives promoted by Russia both in its media space and in Ukrainian one.

Constituent components of IPSO are fakes, manipulations, so-called rumors, propaganda narratives, sabotage, cyber attacks, etc. It has been observed that information and psychological operations in the conditions of war are usually implemented through informal communication channels, fake information messages in Viber groups or messengers, etc. In general, those channels that try to reach as many people as possible serve as a communication field for the implementation of IPSO. First, a certain audience is formed, which is encouraged to think in the 'desired' ways, planting the necessary arguments in it. At the next stage, the audience is 'instructed' what needs to be done. We find that IPSO often arises from the constant use of patriotic appeals and some false thesis with harmful content, and as a result, the harmful thesis begins to spread under the guise of correct slogans. A. Kozinchuk, a military psychologist and officer of the Armed Forces of Ukraine, notes that IPSO is usually carried out in the form of combat operations, information drops, and disinformation. The purpose of such actions is expressive manipulation of the enemy or people from one's environment [10].

In general, in most cases, IPSO is applied only to the enemy, but in the conditions of war, Russia uses these psychological and informational methods also to its military, as well as to society.

The source of information bearing the hallmarks of IPSO is mainly the so-called "word of mouth". Messages transmitted through such a channel are the most dangerous, because they

show signs of “viral” news. People, unfortunately, tend to trust such information, especially if it is widely distributed on social networks. Provocative markers such as “the government hides the truth”, “they don’t tell us anything” and the like are often present in such messages. It is hinted that only supposedly a specific Viber chat, messenger, or Telegram channel is a reliable source of information.

Typical features of IPSO are the synchronicity of publications, factual, logical, linguistic errors, as well as the unreality of the so-called authors of such material. Let us analyze each of the signs in detail.

1. *Author-bot or Internet troll participating in the creation of IPSO.* Messages containing elements of propaganda usually have fake authors, mostly bots hiding behind codenames like Userr1234. The one who works for the state in the field of psychological operations within the infospace is called an Internet troll. The bot farm in Olgino (a suburb of St. Petersburg) is known to the whole world – it was engaged in spreading negative narratives of the Kremlin all over the world, including in Ukraine. This bot farm was exposed by a journalist who got a job working there undercover. The so-called “Olgino trolls” have repeatedly made efforts to shake public opinion in Ukraine since 2014.

2. *Formation of mass despair.* In messages aimed at creating a panic mood, propagandists in the first weeks of the war often emphasized that Ukrainians should leave the country, as evidenced by the following statements: “*People from Kyiv continue to leave en masse in the direction of Zhytomyr*”, “*People’s deputies and security forces are leaving from Kyiv*” (usually such information is distributed in the Internet communities in Russian). Signs of despondency and inciting the horrors of war were also contained in messages that were actively distributed by the Russian occupiers in Telegram, for example: “*The first groups of the Russian Federation entered Kyiv*”, “*Odesa beaches are mined*”, “*Chernihiv is roaring*”, “*Russia is waiting for the surrender of Ukraine*”, “*Assault rifles are distributed in Kyiv*”, etc. They repeatedly spread provocative information that the Ukrainian leadership and government allegedly surrendered the country, and President Volodymyr Zelenskyi fled abroad. However, official sources very quickly refuted these fake reports, or warned citizens in advance about possible false information from the Russian side. For example, one of the official statements of the Security Service of Ukraine on its page in social networks states: “*Be sure: capitulation and surrender of Ukraine’s interests are not possible!*” As one can see, such appeals marked “officially” add confidence to Ukrainians and help to resist manipulations by the enemy. In the first weeks of the war, the Russian Minister of Defense Olexsij Reznikov repeatedly warned about the purpose of this informational and psychological operation on his Facebook page: “*At first they plan to disrupt communications. After that, there will be a mass spread of fake news that the Ukrainian military-political leadership has apparently agreed to surrender. “Confirmation” of this will include allegedly signed “documents”, as well as edited fake videos*”. Further, the minister’s post contains optimistic appeals to the Ukrainian people that this is a lie and there will be no capitulation. “*They will not achieve it! Only victory! Warn everyone you can. Let’s hold on to our weapons!*”, Reznikov sums up at the end of his message. And for persuasion, he adds to the post a real photo taken in Kyiv on Independence Square, where the minister is standing in a bulletproof vest and military uniform. Obviously, such methods are the most effective in combating hostile narratives. A warning from the state leadership and its reaction to the possibility of such negative information from the enemy spreading in the Ukrainian media space is one of the most effective methods of countering negative information stuffings. Optimistic appeals and confidence in a quick victory on the part of the representatives of the military sector and the state leadership help to resist any manipulations and fakes that incite, intimidate and generate panic.

During the year of the war in Ukraine, informational rumors about the preparation of an offensive from Belarus unfold each time with new force and a greater emotional effect, to which everyone is already accustomed and does not perceive such reports as real. The so-called horror rumors about a possible attack by the northern neighbor have been spreading in the Ukrainian media space since the first days of the war, each time with a new date of the Belarusian invasion. This psychological operation covers several goals at the same time: first, to sow panic among the Ukrainian population, in particular, residents of the border area; secondly, to disorient the Ukrainian defense forces, to transfer them from other directions to the Belarusian border; thirdly, to ensure that Belarus entered the war on the side of Russia.

3. *Patriotic symbols or slogans as an element of cover* (often, such a tool of the IPSO is called False-flag operation). Analyzing the sources of manipulative materials that have distinct features of IPSO, we come across messages in which deceptive narratives are hidden under the slogans “*Glory to Ukraine!*”, “*Glory to heroes*”, “*Ukraine is invincible*”, and similar. It is known that Russian IPSO ‘specialists’ often hide behind blue and yellow flags, tridents, and patriotic appeals. In social networks, they resemble virtual saboteurs, because as in the rear, the occupiers often wear a Ukrainian pixel and, under the guise of soldiers of the Armed Forces of Ukraine, penetrate the rear in order to harm the country as much as possible. The enemy’s goal is simple – to capture the trust of the victim through patriotic symbols and slogans, and then, imperceptibly for it, advance the desired idea and force the transformation of the prevailing public opinion in the direction needed by the Russian invaders. Such messages often contain pseudo-constructions such as “*I am a sincere patriot, I do not want to incite treason, but...*”. Just the second part after the conjunction “*but*” conveys a harmful thesis. Sometimes they use the reverse combination: first they write a harmful statement, and then they talk about the invincibility of Ukraine and the indomitability of the people.

Usually, the manipulative thesis is framed by positive statements about strong Ukrainian state, courageous Ukrainian people, confidence in victory, assurances of the invincibility of the Armed Forces.

4. *Deliberate division of Ukrainians into “us” and “them”.* In the conditions of war, the rashist IPSOs often use statements that incite conflict between residents of the west and east of Ukraine. In particular, there is a well-known negative narrative that namely the residents of eastern and southern Ukraine are to blame for Russia attacking them, because they speak Russian and, therefore, have pro-Russian sentiments. This thesis, in various guises, is repeatedly thrown into the infospace with tangible manipulations. The mentioned IPSO is very beneficial to the Russian mass media, because it shifts the responsibility for the invading aggression of the occupiers to those Ukrainians who speak Russian. We understand that it was not actually the use of the Russian language in the Ukrainian-speaking space that caused the Russian Federation’s attack on Ukraine, but geographical logistics contributed to this, because temporarily occupied or captured settlements are located mainly on the border territory.

In the conditions of war, the narrative that while the south and east of Ukraine are being destroyed by the occupiers, the west is living a peaceful and calm life is repeatedly circulating on the Internet. First of all, this thesis is broadcast in Facebook groups and Viber communities in the eastern and southern parts of Ukraine. In modern realities, we observe the falsity of this statement, because one cannot be categorical about “peaceful” life in the West, as it is impossible in the conditions of war. Western Ukrainian critical infrastructure also suffers from aviators. Ukrainian men and women are also going to the front from this territory, ready to give their lives to protect their native people from Russian aggression.

The narrative that all “Westerners” are fighting on the front lines, while “Easterners” allegedly fled, circulates in the media

space in various interpretations. The harmfulness of this statement is obvious, since the deceptive thesis about the flight of people from the east to the west of Ukraine or abroad is aimed at spreading the conflict between Ukrainians. The audience of the specified IPSO actually includes residents of the western regions of Ukraine. Namely in them, based on everyday observations, a false impression is formed that only men and women from the west are fighting. Such unjustified generalizations arose on the basis of two facts: the appearance of a large number of internally displaced persons from the east and south in the western regions, as well as information about local residents who began to defend their native state. In fact, at the front, in the ranks of the Armed Forces and in the rear, the Ukrainian people are protected by warriors from all regions of Ukraine, their share is represented almost evenly, without any significant emphasis in favor of the west, east, north, south or center. L. Kuzmenko, a member of the Commission on Journalistic Ethics, notes that it is unequivocally unacceptable to divide Ukrainians into "us" and "them". In the conditions of martial law, compliance with standards and journalistic ethics by Ukrainian media is not only a sign of professionalism, but also the prevention of new manipulations, fakes or propaganda by the occupiers [9]. After all, any even small flaws in the work of Ukrainian journalists are immediately picked up by the Russian mass media and, based on them, various types of false narratives are spun. Domestic Ukrainian media, on the one hand, unconsciously, without thinking about the consequences, on the other hand, deliberately spread news containing hate speech to create hype or clickability of content. For example, the headlines "*In Lviv, a man from Kharkiv threw two grenades at patrolmen: he may receive a life sentence*" ("Channel 5", September 04, 2022); "*A criminal from Donetsk was caught in Levandivka (photo)*" ("Warta 1", December 06, 2022) gives readers a negative attitude towards internally displaced persons, and can also cause conflicts in communities that host displaced persons. The indication of territorial belonging does not give anything except a false impression that the residents of Donetsk or Kharkiv can pose a danger to society. According to Article 15 of the Code of Ethics of a Ukrainian Journalist, it is necessary to indicate the characteristics of a person or a group of persons only when this information is truly an indispensable component of the publication.

5. *Creating a deceptive effect about the extraordinary power of the enemy.* In the media, misinformation was spread that red flashes on the horizon can be seen allegedly through the cameras on the phones – the tracking of Russia. As it turned out later, if to take a closer look, the image on the phone does not move, even when the position of the hand changes, so the information about Russian surveillance, which is supposedly visible through the phone, is not true. The mass media spread fake news that the occupiers were installing mobile communication equipment that would disrupt Ukrainian networks. In addition, there was even a message with advice on how to correctly choose a network.

6. *Reconnaissance of data that may be useful to the enemy.* Recently, groups with the names "Search for people during the war", "Missing persons", "Search", "Prayer", "Search for people in Ukraine who disappeared after February 24, 2022", "Search for people and military 2022", and similar have become popular on the Facebook network. The audience of such groups is also large – from several thousand to a million subscribers. At first glance, it may seem that such groups are really engaged in the search for missing servicemen, as the content that is almost the same everywhere: posts about missing servicemen with their photos and private information is convincing. However, we do not record a single report that someone was found, which casts doubt on the existence of such groups. On the other hand, joining the activities of such groups poses a danger for our soldiers, because behind such virtual communities, there may be Russian special services, which collect data on Ukrainian prisoners. Due to desperation and at the same time hoping for the omnipotence of social networks, relatives, activists, or concerned citizens post detailed information about the missing serviceman in the specified groups, submitting his photo in a uniform and specifying the surname, first name, patronymic, military

position, unit or company number. In this regard, the Deputy Minister of Defense Hanna Malyar, calling on Ukrainians for information security, noted in one of the posts on her Telegram channel that any published information about the soldier could harm the negotiations regarding his exchange. Also, in captivity, for security purposes, Ukrainian military personnel may present themselves as civilians, some of the missing may be in temporarily occupied territories, looking for ways to return home. It is necessary to observe information hygiene and not to publish in the public space the surnames, first names, patronymics of military personnel, their photos in uniform, designations, call signs, military units and places of their deployment, the circumstances of their disappearance or capture. It is not needed in any case to indicate the date, place, and time of the last contact, as well as information about political views and information about the composition of the family. It is not recommended to tag profiles of military personnel, because hidden information may also be posted there, which will complicate the process of finding them or releasing them from captivity. The Ministry of Defense of Ukraine advises relatives of missing soldiers to contact the Coordination Headquarters for the Treatment of Prisoners of War for information and not to post information on social networks. Also, reports on missing soldiers attract fraudsters who, during the war, not only extort funds from gullible Ukrainians through fictitious aid from abroad under the guise of charitable organizations. Relatives of missing soldiers are offered fake services to find, exchange, release from captivity or return the body of a soldier. Another example of data reconnaissance by the enemy was used in the first months of the war, when evacuation routes were organized from temporarily occupied territories. For example, in March 2022, false information was spread, allegedly on behalf of Ukrzaliznytsia, that an evacuation train would be sent from Kharkiv to the west of Ukraine. For those willing, a special Telegram chat was organized, where it was necessary to indicate one's last name, first name, patronymic and contact phone number. In this way, the enemy tried to collect data on Ukrainian citizens. In January 2023, similar information began to spread that there are allegedly wounded boys in the Burdenko hospital, who may be wanted by their relatives. This was followed by a list of the names and surnames of three military personnel with their dates of birth. Doubt in this message is obvious: connotative markers such as the epithets "*unconscious*", "*severely injured*", appeals "*People, there is a request!*", "*Forward this information to your contacts*", "*Word-of-mouth radio works best*", "*Thank you for your concern*". The appeal to emotions did not leave Facebook users indifferent, because they shared this fake 43 thousand times in one day. It seemed illogical to say that someone was looking for these people in different groups or chats. As it is known, information about missing persons is usually found out in the competent authorities, not in social networks. Fact-checkers of the anti-fake project "NotaYenota" established that the hospital which was mentioned in the message is located in Moscow, and the provided information was distributed for the purpose of collecting detailed data about the Ukrainian military.

7. *The use of esotericism for various types of IPSO.* It is known that the main direction of manipulative psychological operations is to change the thinking and behavior of the opponent. In this regard, the communication expert O. Moroz notes: "If there is a question which the enemy provoked with some tool, say, IPSO or other throws, they go to tarologists, astrologers, numerologists with this question" [4]. It turns out that the use of esotericism as one of the IPSO's tools to demoralize the enemy began a long time ago. For example, as early as World War II, the Allies circulated a fake astrological magazine, *Der Zenit*, to mislead Germany. Historically, Ukrainian nation has always sought to find quick solutions to certain problems. In times of full-scale war, this desire intensifies even more.

Paradoxically, according to the Institute of Sociology, in 2018, Ukrainians trusted astrologers as a source of information more than the government. In the media, astrology is usually used for the purpose of creating clickable content, violating professional standards, because when real qualified experts do not know the

final answers to complex questions, regarding, for example, the date of the end of the war, they are, unfortunately, replaced by pseudo-experts – the so-called tarologists or astrologers. In the Google search engine, entering the tag “tarotologist_war” we come across contrasting media materials with flashy headlines: “A tarotologist stunned with a prediction about the end of the war: «Not soon!»” (“Unian”, January 23, 2023); “The war will end in the spring of 2023: the tarologist predicts” (“Facts”, January 15, 2023); “Famous tarot reader: when there will be a fabulous flowering Ukraine” (“Volyn”, January 8, 2023). As one can see, the predictions of astrologers and magicians flooded the network space with hyped information that supposedly answers the most common questions of Ukrainians today: “When will the war end?”, “When will Putin die?”, “When will Russia fall apart?”. In TikTok and Instagram, tarot became extremely popular during the war, because the so-called “foretellers” make weekly predictions with the aim of promoting their activities, and at the same time advertise personal consultations, the cost of which can reach thousands of hryvnias. TikTok even created a thematic section with the appropriate name TarotTok. Rumors about predictions on possible missile strikes, as well as the date of the end of the war, which is different for all tarologists, have gone viral. Such videos collect hundreds of views. At the psychological level, a person always needs a point of support, especially in a period of instability in society, when panic arises due to a vacuum of information and questions arise for which there is no concrete answer. Often, people do not check whether the predictions of a particular astrologer came true, thus so-called “fortune tellers” continue to spread their popularity on hype topics, especially in conditions of armed aggression. Often, these media characters act in favor of the enemy and become an element of enemy IPSO. Russian mass media use esotericism that affects both their audience and Ukrainian one. Those Ukrainians who practice astrology do not even realize that they are playing along with the occupiers. After all, by talking in network videos about the fact that there will be a lot more blood, dead and wounded due to mass strikes in Ukraine, they oppress the national society, sow panic and fear. The periodic dispersal of disinformation about a possible attack from Belarus in the Ukrainian media space as another example of a false Russian narrative is supported by the testimony of such “visionaries”. Examples of this can be found in the publications of the Ukrainian mass media, which differ in astrological specifics and testify to the low level of competence of such experts: “Will Belarus attack: the tarot reader gave the answer” (Radio Track, May 31, 2022); “Belarus will attack Ukraine in the second week of July” (“Volyn”, July 29, 2022); “At the end of December, an offensive from the Belarusian side is possible” (“Facts”, November 15, 2022); “«The summer will be intense»: a tarot reader predicted whether Belarus will attack” (“Time of action”, May 29, 2022).

8. *An anti-moral call for the cruelest revenge.* In the conditions of the Russian-Ukrainian war, it is quite acceptable in social networks to call for the punishment of the occupiers: their expulsion from Ukraine, capture, physical destruction. However, in the comments, users en masse turn to emotional appeals of an anti-human nature: bloody and cruel dealing with the Russian invaders, killing their children as a response to aggression. From a military-political point of view, this thesis is very harmful and absolutely morally unacceptable, as it is often speculated on by the enemy side, using in their informational and psychological operations broadcast through the Russian media. Correspondent of “ArmyInform” A. Pechersky is convinced that “the danger of this IPSO is that the enemy seeks to dehumanize Ukrainians, to expose them to the same subhumans as the rashists” [14]. We understand that such messages are directed primarily at the international community on the one hand, and on the other hand – at the Russians themselves. For foreigners who observe the war from the outside, such messages carry misinformation about the alleged brutality of Ukrainians as well. In reality, according to official data released by the Office of the Prosecutor General, on February 2, 2023, the rashists killed 460 Ukrainian children, while Ukraine did not harm a single Russian child. Through this IPSO, the occupiers are trying to create an opinion in the world that Ukraine does not commit brutal war

crimes against Russia, supposedly because it is technically incapable of doing so. Thus, such theses expose Ukrainians in the eyes of the world as barbarians, similar to Russians, they are aimed at persuading the leadership of other countries not to supply weapons to the Ukrainian military. On the other hand, the narrative about “bloodthirsty Nazis” is widely spread in Russian society with the aim of strengthening anti-Ukrainian sentiments and fanning militarism among the already zombified Russians. Every time they receive new arguments that explain the so-called “special military operation in Ukraine”. Russians are constantly being ‘fed’ the narrative that if the Russian army does not exterminate Ukrainians, than the “Banderians”, “voracious neo-Nazis”, as the occupiers call Ukrainians, will kill them and their children. Since the beginning of the full-scale invasion, Russian propaganda has spread the thesis that Ukraine itself was going to attack Donbas and Russia, and the Russian army acted only in advance and launched a “preemptive special operation”. The second informational and psychological propaganda spread in this context is that Russian IPSO specialists complement the thesis about the responsibility and inevitable punishment of persons who agreed to voluntary cooperation with the occupiers with dangerous ideas designed to split the Ukrainian nation. Emotional appeals such as “There will be no excuses for the collaborators!”, “The collaborators will be punished most severely!” are spreading by Russian bots in social networks. This statement reinforces the so-called “Nazi brutality”, presented through the eyes of the Russian invaders, about the alleged bloody punishment of all indiscriminately, who somehow interacts with the Russians in the occupied or temporarily captured territories. The provocative message that all Ukrainians who are in such territories are already collaborators was repeatedly spread on the Internet. It is clear that such blanket accusations of collaborationism are a way of justifying the occupation. The purpose of this IPSO is obvious – to show the residents of the occupied territories that after the de-occupation, Ukraine will terrorize the local residents, therefore widespread Russian propaganda calls on Ukrainians in the occupied territories not to seek liberation, but to remain under the rule of the invaders. The specified informational and psychological operation was broadcast to three groups of recipients: Ukrainians in the occupied territories, citizens of Russia, and the international community. Accordingly, in each of the groups to which the propaganda is directed, information is represented from the most advantageous angle for Russia. Citizens of Ukraine, who are in the temporarily occupied territories, are being sent a message that they are supposedly being protected from “punishers”. For Russian society, this IPSO carries the thesis of protecting civilians from the “Nazi Kyiv regime”. On the international stage, they are demonstrating a false narrative that if Ukraine de-occupies the captured territories, bloody revenge against local residents will begin along with repression. This IPSO is dangerous for Ukrainians in the temporarily occupied territories, who are in an information vacuum, because it can split Ukrainian society, increase hysteria and panic among the population, which has been under occupation for a long time.

9. *Excessive emotionality of texts and call to action.* A typical feature of false propaganda narratives is a call to active action, conveyed through the excessive emotional load of the message. Usually, important connotative aspects of IPSO are placed in text fragments, written in capslock or highlighted in bold. An emotional direction can also have a correspondingly designed image, through which the audience read the desired emotion – fear, panic, despair, disappointment, occasionally – elation, admiration, or delight. The verbal components of IPSO are lexemes that have an emotional effect: *danger, catastrophe, save, violence*, etc. Despite the dominant role of negative emotional content in Russian narratives, we rarely come across positive markers that supposedly hide an important fictitious message under a morally reinforcing context. Guided by the emotional perception of the offered message, a person often forgets about critical thinking, clings to the hook of a false narrative, picking up and spreading the IPSO beneficial for Russia. On a psychological level, the effect of such a message causes double damage, because at the level of euphoria, people believe the perceived information, and then, when they

understand the reality, they become disillusioned and hopeless, which is exactly what the enemy is trying to achieve. An example of such informational and psychological operation is the dissemination of messages on the network about the alleged liberation of a particular settlement, although there is no official information about the de-occupation before that. Under the influence of a portion of positive emotion, which was presented at the beginning of the thesis, a person mentally rejoices, but then it turns out that there was no such liberation, the information is false. After that, a moment of disappointment comes. For the category of particularly vulnerable people, such narratives are dangerous, because they instill hopelessness and produce a depressive state. This is the main goal of Russian propaganda: through the negative or positive emotional components of the text of the messages, to induce fear and panic in Ukrainians, make them despair, flee abroad, etc.

10. *Appeal to the individual as a persuasive argument.* This technique is always used to spread manipulation and propaganda, it resembles fraud, because starting from the initial phrases such messages usually create a psychological trap for the recipient. Phrases like “*All informed persons have known for a long time...*”, “*All reasonable people should definitely know this*”, have a distinct personified direction, they inspire confidence in readers, because they contain an element of praise. After them, in the message, IPSO specialists provide the necessary information.

11. *Demanding a quick response to messages.* The Russian narratives embedded in certain IPSOs, particularly those represented by short network messages, contain appeals that demand a quick response in the audience. Usually, such messages are formatted with the syntaxemes “*Urgently distribute*”, “*Notify everyone!*”, “*Spread to all possible groups*”, “*Transmit to family and friends as soon as possible*”, and similar. At the same time, the responsibility for the distribution of such messages is transferred to the recipients, as evidenced by the manipulative call phrase “*Do your part in spreading the message, and then it will finally reach the addressee*”. Following it, we subconsciously read a phrase that transfers the element of guilt to the recipient: “*If you don't spread it, you yourself will be guilty of it*”. At first glance, we do not think twice, but when we think carefully about it, we can realize – why should we spread a certain message just because someone thinks it is necessary? Precisely this paradoxical request points to the falsity of such infostuffings, as we understand that true and valuable information is transmitted through official channels, and not via addressing to the virtual audience of social networks for help.

12. *Devaluation of official sources of information and involvement of pseudo-experts.* A typical feature of Russian IPSO is the indication of ignoring Ukrainian official sources, their devaluation. Often, fake messages are accompanied by the phrases “*the government does not say anything*”, “*everything is hidden from us*”, “*the official mass media is silent*”, etc., which not only incite despair among the population, but also discredit the state authorities. If the news spreads the opinion that official sources of information are not trustworthy, distort or hide something, then this is an element of IPSO. An effective means of false narratives is the thesis that supposedly “*all the media is lying, and I will tell you the truth*”. This phrase is played out in different ways in the manipulative interjections of the occupiers, which are broadcast on the network in the form of so-called “*information rumors*”. ‘Experts’ of such fake news are usually relatives or acquaintances in the prosecutor's office, the police, the Security Service, the Armed Forces, etc., without any specifics regarding personal data. Sporadically, we come across generalized statements, for example: “*experts say*”, “*according to military experts*” and the like, again without specification.

13. *Discrediting Ukraine in the international arena.* During the war in Ukraine, Russia uses a wide range of tools of information influence in order to prevent the supply of weapons to Ukraine from Western partners through fakes and various provocations. The purpose of false rashist narratives is to block the supply of weapons to Ukraine and split the international coalition

regarding Ukrainian support. In the context of this, propaganda materials appear in the Russian mass media, in which Ukraine is accused of smuggling, reselling, and improper use of weapons provided by the international community. It is clear that they are all created around the same IPSO, the main goal of which is to discredit Ukraine in the eyes of the Western world, so that the country, which is suffering because of the war, will lose its main support.

Sometimes it is difficult to distinguish IPSO among the news, since elements of informational and psychological operations can also be real events. Evidence of this is the information intelligence data published in the “*Dzerkalo Tijnia*” (“*Mirror of the Week*”) publication that on the night of February 25, the Russians planned to carry out sabotage activities on power grids and substations in order to disconnect a large part of the city of Kyiv from electricity supply and communication in order to sow panic among people. It was also planned that arson and acts of looting would be committed in order to cause even greater panic, to direct the power of law enforcement agencies to stabilize the situation in the country instead of fighting saboteurs. The occupiers, taking advantage of the panic of the Ukrainians, were to carry out a massive cyber attack on the websites of the authorities.

The components of IPSO are fitting and cyber-attacks, turning off the websites of authorities. More than once, Telegram and other messengers spread fake information under the pretext of allegedly official information from the Security Service of Ukraine, which requires Ukrainians to follow a link for verification purposes. This link resembles the address of the SBU website, but in fact it is fake. They offered to add a new device to the account so that the enemy could gain access to personal information, and there was also an opportunity to write on behalf of the person who followed this fake link.

Usually, IPSO does not have a ‘limitation period’, because pseudo-concreteness allows it to exist for a long time and periodically appear in the media space from a different point of view each time (there are, for example, known narratives about the lack of a certain blood group that must be donated, as well as ten-year-old fakes about soldiers in difficult conditions, “*informational horror stories*” about the expected Belarusian attack, etc.). Sporadically in the mass media, we come across examples when Russian info-‘injections’ are collapsing instantly, just after appearing in the information space. This is what happened with the Kremlin's IPSO about the “*dirty bomb*” that Ukraine allegedly intended to use. This was confirmed by A. Yusov, a representative of the Main Directorate of Intelligence of the Ministry of Defense: “*The whole world did not believe in this outright fake, it is a completely unsuccessful information and psychological operation*” [17].

4 Conclusion

We reviewed some of those IPSOs that Russia conducts in social networks, broadcasting them to the Ukrainian domestic media sphere starting from February 24, 2022. Their activation with the beginning of a full-scale invasion happened instantly, because the rashists took advantage of the fact that the Ukrainians fell into an information vacuum from the first days of the war – the lack of certain information, the lack of understanding of what was happening, the lack of full official information. In these conditions, they tried to spread a large number of IPSOs, and through them, false narratives that would lead Ukraine into a state of panic and despair, discrediting it in the eyes of society and the international community. But Ukrainians have shown the world that they are capable of resisting the information war, because now, after a year of the invasion of the Russians, they have already developed effective tools and designed effective strategies to counter the Russian IPSO in all their manifestations. In the Ukrainian media space, such anti-fake resources and fact-checking projects as “*NotaYenota*”, “*Brekhunetz*”, “*Media Detector*”, “*BezBrekhni*”, “*Filter*”, “*Russian fake, go to...*”, public organization “*Information in Its Purest Form*”, the fact-checking bot “*Perevirka*”, which fights against false narratives and Russian interference, appeared. It is necessary to counteract

IPSOs carefully and competently, so as not to accidentally increase their effect. Among the basic tips on information hygiene in the conditions of the Russian-Ukrainian war, which will help effectively resist Russian propaganda and manipulation, we note the following:

1. It is worth subscribing only to reliable sources, that is, pages or channels of state structures, heads of regional military administrations, national mass media from the so-called “white list”, authoritative local news [15].
2. It is also necessary to monitor anti-fake resources, which often talk about enemy IPSO, Russian propaganda and manipulation, refute fakes, and point out the signs of so-called informational rumors.
3. In social networks, one should communicate only with people whom he/she knows, one should ignore those suspicious messages that come from unknown accounts, especially if the page has some unusual content, or if it is poorly filled or closed.
4. It is necessary to avoid groups with suspicious messages, information about the military, with Russian names, etc.
5. When splashing on information containing IPSO, in no case should it be distributed, even with an indication that it is fake, manipulation, propaganda, etc. After all, by reposting any harmful information, we do not minimize it, but on the contrary, we contribute to the development of IPSO.
6. One should not show any reactions to the messages from the IPSO, as this way attention will be drawn to the submitted false information, which can spread even more widely.
7. It is not necessary to publicly convince acquaintances in open comments not to spread messages containing IPSO - it is better to say this in private communication.
8. It is also necessary to remember that critical information is often transmitted through closed channels, and messages in the form of viral videos or spam mailings are a clear sign of the information and psychological operation of the Russians.

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TOOLKIT FOR THE FORMATION OF NARRATIVE STRATEGIES OF THE RUSSIAN-UKRAINIAN WAR (USING THE 2022–2023 MEDIA LANGUAGE AS AN EXAMPLE)

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Abstract: The article clarifies the scope of the concepts of narratives and subnarratives, comprehensively characterizes the narratives of Russian propaganda updated as of February 24, 2022. On the basis of processed materials of social networks and texts of traditional mass media, the peculiarities of the formation of narrative strategies of the Russian-Ukrainian war are determined. The analytical-synthetic method, methods of comparison and fact-checking served as the basis for the thematic classification of false messages, which are combined into eight blocks: 1) disbelief; 2) demonization of Ukraine and Ukrainians; 3) justification of aggression; 4) split; 5) intimidation; 6) ennoblement of the enemy; 7) shifting blame; 8) scaling of the conflict. Focusing on the priorities of multi-vector research made it possible to identify seven ways of suggestive influence on the recipient with the help of language tools: 1) introduction into a common synonymous series, which contributes to the formation of additional negative connotations of the word; 2) specifying seme, the functional range of which usually correlates with the purpose of language units of the first variety; 3) statements in the form of truisms, thanks to which the information appears as obvious and does not require proof; 4) conceptual metaphors aimed at justifying the war, contempt for Ukrainian national symbols; 5) euphemisms, with the help of which it is possible to either reduce the scale of the committed negative action, or to hide the negative consequences of the actions of opponents; 6) presuppositions leading to shifting the blame for the war onto Western countries and international alliances; 7) dehumanizing and demonizing vocabulary, which takes part in modeling situations that cause hatred and justify aggression.

Keywords: narrative; novelties; Russian aggression; language means; media language.

1 Introduction

In connection with the mega-fast development of information and communication technologies and the efficiency of news transmission, information warfare has become a new type of confrontation. The main purpose of waging a so-called “war without weapons” is, first of all, to demoralize the opponent, gain an emotional advantage over him, legitimize criminal actions, justify victory in the confrontation through discrediting, and influence the change of borders without the use of real weapons. For decades, Ukraine was the main target of the Russian information war. Direct armed aggression against Ukraine, expressed in the annexation of Crimea, the development of the conflict in some territories of Donetsk and Luhansk regions, was always accompanied by disinformation attacks. In the current conditions of the Russian-Ukrainian war, we are daily witnesses of powerful media attacks by the enemy with overt propaganda content and manipulation technologies, information and psychological operations (IPSO), which have a destructive effect on the consciousness of Ukrainians. Since the beginning of the full-scale invasion, Russian propaganda has produced a large number of narratives designed to have a harmful effect on Ukrainian society, in particular, to split Ukrainian unity, demoralize the actions of the Ukrainian army and state leadership, discredit politics, economy, culture, sow panic, disrupt the work of emergency services, etc. Through the paradigm of false narratives, Russia also exerts influence on its citizens, namely: zombifies their consciousness, directs them to negative actions, cruel revenge, and justifies aggression in Ukraine.

Since 2014, the scientific community has increased attention to the study of Russian propaganda narratives. N. Vashchenko considers narratives as an influential problem in the conditions of Russia's conscientious war against Ukraine [35]. M. Ozhevan analyzes the challenges and risks facing Ukraine in the global war of strategic narratives [20]. The key narratives and methods of Russian propaganda in Ukraine are characterized in detail by

H. Yuskiv, noting the situational nature and flexibility of Russian information activities, the lack of a consistent model for interpreting narratives directed against Ukraine [36]. Propaganda methods in Russian Internet resources are studied by N. Semen [26], B. Ivanytska [9], N. Nikolayenko, Yu. Vasylevich, and O. Komarchuk [19]. O. Zozulya focuses attention on fakes as tools of information warfare [37]. After the full-scale invasion, scientific and journalistic intelligence began to appear, dedicated to the multifaceted study of Russian disinformation. O. Zemlyanska and D. Semenov interpret propaganda as a weapon of modern war. A. Pechersky writes about rashist informational and psychological operations in the conditions of war [21; 22]. Scientists focus attention on typological features, linguistic and stylistic markers of Russian media manipulations [10], as well as methods of fact-checking and media literacy development when consuming negative content [10]. It is significant that researchers study not only the narratives of the period of hybrid (2014–2021) and full-scale (from February 24, 2022 – until now) Russian aggression against Ukraine – attention is also focused on the study of narratives of the pre-war period 2003–2013 [12]. In the scientific discourse, a system of terms has been formed that reflect the role of narratives in the conduct of information warfare that precedes or accompanies an armed conflict, in particular, it refers to such terms as “narrative war”, “war of narratives”, “battle of narratives”, “stabilizing narrative”, “mobilization narrative”, “armed narrative”, “strategic narrative”, etc. The analyzed material undoubtedly shows that Russian disinformation of various types (fakes, manipulation, propaganda, so-called “rumors”) is an important object of research, which has repeatedly been in the field of view of scientists. At the same time, since a full-scale invasion, the enemy does not stop using various narrative strategies, seeking to impose false information in the media sphere and win the information war. Precisely through false narratives, Russia broadcasts informational and psychological operations, using the most diverse methods of influence. In view of this, there is a need to research the toolkit for the formation of narrative strategies of the Russian-Ukrainian war, in particular, the identification of typological features in the media, linguistic style markers, target audience, means of distribution, etc.

2 Materials and Methods

Examples of narratives promoted by Russia in the media space through social networks and traditional mass media from February 24, 2022 served as the research material. The source of the analysis was the texts of such propaganda resources as lenta.ru, gazeta.ru, news.rambler.ru, smotrim.ru, TV channels “DNR”, “Russia-1”, statements of politicians. The scientific analysis involved the advice of media experts, practicing journalists, fact-checkers, as well as recommendations for refuting Russian narratives of such anti-fake projects as “NotaYenota”, (“Brekhunetz”) (“Liar”), “Detector Media”, “BezBrekhni”, “Filtr”, “Russian Fake, go to...”, research by the public organization “Information in its pure form”.

The methodology of studying the narrative strategies promoted by Russia in the modern media space along with the armed and information war provided for the step-by-step application of both general scientific and special methods and approaches, which made it possible to achieve the result. At the first stage, a comparative analysis of scientific intelligence and journalistic publications on the selected problem was carried out. The second stage included a direct study of the language of the Russian media in the context of the circulation of propaganda narratives about Ukraine. Analytical-synthetic method, as well as methods of comparison and analogy, a special method of fact-checking made it possible to compare the methodological concepts of the essence of the narrative strategies of rashists, to reveal the peculiarities of their aspects in order to reduce the negative destructive impact on the Ukrainian audience. Seme-component analysis was used to determine the peculiarities of the use of

lexical units for the purpose of manipulative influence, the method of conceptual analysis was used to differentiate conceptual metaphors; the method of contextual analysis was applied for the study of changes in the connotative components of the semantics of a word.

The article analyzes the toolkit for the formation of narrative strategies of the Russian-Ukrainian war based on the material of the language of the media of 2022–2023, in particular, the typological features of Russia's narrative propaganda are investigated; linguistic markers of false messages are characterized; the eight most common blocks of narratives on the theme of ideas are singled out and described; attention is focused on linguistic means of suggestive influence and actualization of concepts; the target audience and the purpose of directing negative media content were investigated.

3 Results and Discussion

Thematic classification of narratives

In the traditional sense, a narrative is considered as “narration (as a product and as a process, object and act, structure and structuring) of one or more real or fictitious events, which are reported by one, two, or more narrators to one, two, or more narrated” [33, p. 73]. That is, from the traditional point of view, texts that report on something that does not really exist cannot be narratives. However, the transition of the concept of narratives into the political plane somewhat expanded its semantics. In particular, in the “Political Encyclopedia”, the narrative is interpreted as “an explanation of events in the form of short assessments from the point of view of common sense, which often have the appearance of simplification”. As an example, the following political narratives are given: “Russia is an older brother”, “America is a strict father” [15, p. 476]. In the proposed work, we consider the term *narrative* to denote clear, concise theses that highlight the ideological content and predict the impact on society for the purpose of forming public opinion. A narrative can be implemented in subnarratives. For example, the purpose of the narrative “*Russia is not at war with Ukraine, but with NATO*” is the formation of public opinion that NATO is the culprit of the war. This interpretation helps Russia to: a) scale the conflict; b) blame someone for aggression; c) preserve in the worldview of the recipient the opinion that ordinary Ukrainians are not affected by the actions of the Russian army. This narrative can be implemented in several narratives: “*NATO troops are fighting on the territory of Ukraine*”, “*Transferring weapons to Ukraine is NATO's participation in the war*”.

It is known that narrative war is the oldest type of war. Media researchers understand narratives as a mixture of facts and fiction, knowledge and manipulation, that is, it is not just disinformation or fake news, narrative is a much more complex concept. Today, narratives as a so-called type of “weapon” are able to change the picture of the world. After all, this set of statements becomes a toolkit for understanding and comprehending the situation, exerts an influence on individual and mass consciousness. It is clear that, managing the information space, the state manages the mass consciousness of its citizens with the help of narratives. This is precisely what Russia is doing in relation to its society and Belarus, where the arrival of the Russian media system has clear results in favor of the “Russian world”. In the new manifestation, Russian narratives are aimed at establishing their own narrative and devaluing the opponent's narrative through simplistic and unambiguous theses, often supported by a powerful emotional component. The full-scale invasion led to the emergence of new Russian narratives directed against Ukraine, although they often stem from previous metanarratives, because the mass consciousness of the recipients understands the appeal to them, as they have long been recorded in the public memory. In this regard, A. Maan claims that “narratives give meaning to what before was a set of events that were sometimes connected and sometimes not. They bring events together in a proper manner and for certain purposes” [17].

In the process of analyzing the texts of the Russian mass media and social networks, we singled out the most common Russian narratives, grouping them by topic into eight blocks: 1) despair; 2) demonization of Ukraine and Ukrainians; 3) justification of aggression; 4) split; 5) intimidation; 6) ennoblement of the enemy; 7) shifting blame; 8) scaling of the conflict.

1. Narratives of despair. Since the beginning of the Russian-Ukrainian war, the enemy has been trying to fight not only on the battlefield, but also looking for various means of psychological pressure on Ukrainians to undermine their fighting spirit, instill pessimism, despair and hopelessness. In messages aimed at creating panic, propagandists in the first weeks of the war often encouraged Ukrainians to leave the country.

The specified thematic block is represented by the narratives “*Ukraine will fall in three days*”, “*Ukraine will fall apart*”, “*Ukraine is gone*”, “*Ukraine is living its last days*”. With lightning speed, on the first day of the full-scale invasion, February 24, 2022, the Russian media published disinformation reports that the occupying forces had approached the Ukrainian capital, implemented a complete blockade, some claimed that Russian troops had already entered the city. This was evidenced by false messages actively distributed by Russian users in social networks with the context: “*Russian military entered Kyiv*”, Russian. “*The Ministry of Defense of the Russian Federation reported that our troops blocked Kyiv from the west*”, “*The shocking success of the Russian army. Battles are going near Kyiv*”, etc.

Also, Russian propagandists spread false information about the “capture” of Kharkiv, Mariupol, and Zhytomyr in a few hours, as evidenced by publications such as “*A tactical landing force of the Armed Forces of the Russian Federation landed near Zhytomyr*”. In fact, the “second army of the world” was never able to completely surround Kyiv. The Russian invaders, who tried to break into the capital from three sides, suffered significant losses. As one saw, a little more than a month later, they fled from the Kyiv region, leaving the equipment and bodies of their comrades behind.

The narrative about the so-called “three days” was activated after the phrase of the self-proclaimed Belarusian president Oleksandr Lukashenko, who issued a statement that “the war with Ukraine will last a maximum of 2-3 days”. According to Russian fake sources, in a matter of hours on February 24, the occupying army allegedly “entered” Kharkiv, “crushed” its defenders and completely “captured” this city, as indicated by false reports with the context: “*There were footage confirming the battles for Kharkiv - we took the city into a circle, the Armed Forces of Ukraine is trying to unblock the city*”. At that time, indeed, the regional center was heavily shelled. Attempts to enter Kharkiv were made by the occupiers only on February 26, but the Russian armored vehicles that broke into the city were completely burned.

Motives of despair and panic are given rise by narratives related to weapons and the protection of Ukrainian borders (“*The air defense system of Ukraine has been destroyed*”), as evidenced by reports in the Russian media: “*Currently, the Armed Forces of Ukraine are in a critical situation. The best thing the president of Ukraine can do now is to leave the country*” (smotrim.ru, February 18, 2023). Propagandists also deceptively assured through information channels that they “completely destroyed the aviation of Ukraine”, “destroyed military bases”, “destroyed the command of the Armed Forces of Ukraine”.

By manipulating the media, the Russians enjoyed the pseudo-power of the Russian army. The public began to abound with reports about the complete defeat of the Ukrainian army, about how the defenders of Ukraine, in a fear, are fleeing from the “second army of the world”. With particular pleasure, the Russians consumed the lie about the destruction of all Bayraktar UAVs. In order to add truth to false reports, the Russian mass media began to spread publications that hid the real situation about the war in Ukraine, for example: “*The Ministry of Defense of the Russian Federation called the statement of the Chief of the*

Armed Forces Zalužny "about the loss of Russian aircraft and armored vehicles" a "complete lie".

"The West does not provide enough weapons", "The West is running out of weapons" – Kremlin propaganda repeatedly tries to promote these narratives not only through its own media, but also through foreign ones. Russian mass media with renewed vigor constantly misinform about the possible termination of military aid to Ukraine. The impetus for this was the statement of the former adviser to the US Defense Minister Douglas McGregor in an interview with the YouTube channel Judge Napolitano, who stated that the West allegedly does not have enough time to manufacture weapons for Ukraine. Propagandists picked up this statement and brought it to the readership from a certain point of view they needed, distorting the true information and resorting to manipulation.

There is also a narrative circulating in the media that "a Korean script is being prepared in Ukraine". On February 7, 2023, the deputy head of the Russian Security Council, Dmytro Medvedev, said that Ukraine was apparently considering the possibility of ending the war by dividing the territories, becoming "South Korea" and hoping to liberate the occupied part of the country. Such leaks are spread with the aim of reaction of Western partners, hoping that they will pick up on this scenario of the end of the war in Ukraine. The analyzed narrative was broadcast as part of the Russian information and psychological operation (IPSO) about the alleged deliberate division of the territory of Ukraine. In response, Oleksiy Danilov, Secretary of the National Security and Defense Council of Ukraine, stated that there will be no Korean scenario in Ukraine, which the Russian invaders want to impose, failing to capture the entire state.

The narrative "Russian troops destroyed the HIMARS" appeared with the aim of creating panic among the Ukrainian society about Russia's supposed victory. Although in fact, similar fake messages that represent this narrative emerge every time in a new way in the spaces of the information field. After the catastrophic losses of the Russian Armed Forces in Makiivka, the Russian Ministry of Defense addressed to outright lie, announcing the destruction of five Ukrainian HIMARS MLRS. At the same time, the total number of such missile systems, which the Russians "destroyed" in words, already doubles their real number, which is in service with the Armed Forces of Ukraine. In propaganda messages with outright lies, the Russians appear as superheroes, because every time they supposedly "liquidate" Ukrainian HIMARS, although we see that this disinformation is repeated several times. According to Russian mass media, the first HIMARS were "destroyed" by the invaders on the territory of Ukraine on July 6 (two at once). Then they "stroke" two such systems, in particular, on August 1, October 1 and 29, November 20, December 8 and 26. In addition, there were many days when the rashists claimed to "destroy" one HIMARS at a time. And on January 3–4, after the shameful disaster in Makiivka, the invaders resorted to blatant lies and hyperbolization of their war capabilities, announcing that they had allegedly eliminated as many as five HIMARS systems – one that hit Makiivka, and four more in Druzhkivka. This false information was broadcast by the government news agency "RIA Novosti" with an appeal to the Ministry of Defense of the Russian Federation.

Despite the efforts of the Russian narratives of the analyzed thematic block to sow panic and despair among Ukrainians, we see that even after a year of war, they failed to do so, because Ukrainian society has become ready for various types of false narratives by Russians, has learned to critically perceive information and differentiate between manipulative content and enemy fakes and propaganda. Ukraine courageously fights back both on the real front and on the informational front, continuing to win back the temporarily occupied territories.

2. *Narratives of demonization of Ukraine and Ukrainians.* To justify its actions in Ukraine, Russian propaganda resorts to the process of demonizing the enemy. For this purpose, narratives were created about the allegedly criminal behavior of Ukrainians

and the Ukrainian authorities in relation to the Russian-speaking population.

The narrative "Fascism/Nazism (neo-Nazism) in Ukraine" was updated during the 2004 presidential election campaign, when Russian political technologists who worked for the pro-Russian candidate V. Yanukovich positioned the pro-Ukrainian candidate V. Yushchenko as a fascist and a Nazi, and accordingly, everything Ukrainian – as fascist and Nazi [12, p. 278–271]. Russian propaganda uses the terms *Nazism* and *fascism* as absolute synonyms. In addition, these terms-lexemes are used in the Russian propaganda discourse as verbalizers of the concepts *Ukrainian*, *Ukrainian military*. This narrative was also used in 2014 during the annexation of Crimea and the capture of part of Donbas, and since February 24, 2022, the mention of Ukrainian Nazis in the Russian media has increased from 50 uses per day to more than 2,000.

Analysis of the media discourse (traditional mass media and social networks) gives reason to determine that this narrative is realized in several sub-narratives.

The sub-narratives "Fascists seized power in Ukraine", "Ukrainian people are held hostage by the Nazis", "Neo-Nazism is raising its head in Ukraine" allow Russia to create the illusion that the population of Ukraine should be freed from the Nazi/fascist government. For example: "Ukrainians are not our enemies. Ukrainians are a nation occupied by fascists. Temporarily. We are already working on it" (M. Simonyan, "Russia 1", January 26, 2023); "People should have been allowed to speak in their own language, in their own way, but the nationalist government set up a blockade" (O. Skabeeva, "Russia-1, March 10, 2022).

Subnarratives "Ukrainian Army is Nazis", "Azov Regiment are Nazis" should be also noted. Russian propaganda especially often resorts to labeling the Ukrainian military as Nazis/fascists, in particular, the Azov Regiment, which resisted Russian troops in Mariupol. For example: "Neo-Nazis continue to detain civilians, forcing them to become living targets. The humanitarian corridor has been operating for 1.5 hours. Only 5 people managed to get out of Mariupol. The rest are hostages" (O. Skabeeva, "Russia-1", March 5, 2022). In this context, the term "neo-Nazis" is used as an absolute synonym for the term *fascists*. The analyzed narrative strategy is formed by the sub-narrative "The President of Ukraine is a fascist/Nazi", which is expressed in the following propaganda contexts: "I believe that Zelensky is a terrorist, a rural Satanist, a fascist" (Kadyrov, February 12, 2023); Russian "The USA can no longer turn a blind eye to Zelensky's fascism" (vesti.ru, February 16, 2023).

The narrative "Ukraine has biological weapons" is used to create a negative image of Ukraine in the international arena. The sub-narrative "Ukraine uses dangerously infected mosquitoes, birds, bats against the Russian army" was voiced by the Russian representative at the UN on October 28, 2022. Such a statement caused the emergence of the language meme "fighting mosquitoes" in the Ukrainian network discourse. No less widespread in the information field is the sub-narrative "Ukraine uses prohibited weapons", in particular, it is presented in the daily reports of the Ministry of Defense of the Russian Federation: "The Armed Forces of Ukraine began the mass use of ammunition filled with phosphorus" (gazeta.ru, February 27, 2022).

Even before the full-scale invasion, the sub-narrative "the USA has placed biolaboratories in Ukraine" was periodically disseminated through various communication channels. In 2021, petition No. 22/118694-ep was registered on the website of the President of Ukraine under the name "US biolaboratories in Ukraine are FACTORIES OF DEATH, CLOSE THEM IMMEDIATELY". At the beginning of the full-scale aggression, this topic was brought up to date, which was reproduced in the texts of the Russian media: "The Ministry of Defense of Russia has repeatedly drawn attention to the military biological programs implemented by the Pentagon... In particular, network

including more than 30 biological laboratories has been formed on the territory of Ukraine" (gazeta.ru, March 07, 2022).

In order to discredit Ukrainian state and Ukrainian military leaders, the narrative "Ukraine mocks its population and Russian captives" is actively circulating in the Russian mass media. The sub-narratives "Ukraine committed genocide against the population of Donbass for 8 years", "Ukraine bombed Donbas", "Ukraine kills Russian people in Donbass" in the Russian information and propaganda discourse present Ukraine as an aggressor. The analyzed narrative was used by Vladimir Putin in his address on the start of hostilities in Ukraine, mentioning the alleged "people who for eight years have been subjected to bullying and genocide by the Kyiv regime" (V. Putin, February 24, 2022). Russian news reports also broadcast the sub-narratives "Ukrainian military kills civilians", "Ukrainian soldiers torture locals", "Army forces mock the families of Russian prisoners", "Army forces mock prisoners", "Army commanders mock their soldiers", "Ukrainian Nazis beat veterans".

Perhaps the most common narrative as an attempt to downplay the aggression of the invaders is "Ukraine oppresses / humiliates Russian speakers". It is used in order to justify an attack on an independent state, since Russian-speakers were allegedly oppressed in Ukraine before the war. This thesis has been used by Russian media since 2014, that, they say, those who speak Russian were restricted in their rights in the east, and they need protection. In their propaganda, the rashists refer to the law "On ensuring the functioning of the Ukrainian language as a state language", which was adopted by the Verkhovna Rada in April 2019. The law stipulates that the state language in Ukraine is only Ukrainian, but Russian is not prohibited at the individual level. In Russia, this law was called the one that prohibits the Russian language, while in reality its main task is to eradicate the remnants of the discriminatory approach to the Ukrainian language, which is an echo of the era of the Russian Empire and the USSR. The sub-narratives "Ukraine bans the Russian language" and the like, which were common even before the war, acquired a new scale and an enhanced content tone with the full-scale invasion.

3. *Narratives justifying aggression.* Since the beginning of the hybrid aggression in 2014, Russia has been using media resources to convince the world community that its behavior regarding the annexation of Crimea is justified. In particular, it is about the widespread propagandist narrative "The people of Crimea decided to be with Russia". In 2022, propaganda narratives aimed to convince society of the feasibility of a full-scale invasion of Ukraine. The narrative "The threat of NATO" is implemented in several sub-narratives "If Russia had not attacked, then NATO bases would be on the border", "NATO promised not to expand to the East and did not hold back its words". Two days before the full-scale offensive, V. Putin announced that he would recognize the quasi-republics of the DPR and LPR because Ukraine was not fulfilling the Minsk agreements. In this regard, the propaganda media actively picked up and began to broadcast the narrative, beneficial for the Kremlin - "The war started because Ukraine did not fulfill the Minsk agreements" - in order to blame the opponent and justify the war in Ukraine. The previous campaign to demonize Ukraine gave grounds for interpreting the military invasion as the need to destroy Nazism, which explains the emergence of the false narrative "Ukraine needs to be denazified". V. Putin called denazification one of the reasons for the start of the Russian-Ukrainian war. Today, the Russian Federation constantly puts forward this demand in the negotiation process. It is clear that all accusations of the Russian authorities about the need to carry out the so-called "denazification" in Ukraine are absurd. Through this narrative, Russia baselessly accuses the Ukrainian authorities of fictional "oppression" of Russian-speakers, the entry of the far-right into the authorities, the "ideology of Ukrainian Nazism", etc. This is evidenced by the headlines of the Russian media: "Lavrov told what denazification in Ukraine means" ("TAAS", March 18, 2022); "Medinsky explained why the de-Nazification of Ukraine is important for everyone"

("Ria.Novosti", March 18, 2022). In the context of this, it is worth noting that a number of scientists from around the world who study the history of genocide, Nazism, and the Second World War signed a statement that the Russian authorities misuse the term "genocide" as well as the memory of the Second World War and the Holocaust, equates the Ukrainian state with the Nazi regime in order to justify the war it is waging with Ukraine. "There was no other way out in Russia" is one of the justifying narratives used by the highest officials of the Russian Federation in their speeches, 'proving' that events took place in Ukraine to which Russia had to necessarily react: "Obviously, we didn't have other choice... And there is no doubt that the goals will be achieved" (V. Putin, gazeta.ru, February 12, 2022). With a propagandist accent, the narrative "Mariupol has been cleaned" appears in the Russian mass media. The city of Mariupol is one of those that Russia subjected to heavy bombing, as a result of which most of the buildings were destroyed. A pro-Russian official made a statement in which she called such a situation a purge: "Mariupol has been cleaned. It was desecrated with beauties, tinsel, parks. And now, through the terrible, through the horrible, it was cleansed" (TV channel "DPR", July 12, 2022).

4. *Narratives of the split* (narratives of the East-West confrontation of Ukraine). In the conditions of war, Russia often use statements that incite conflict between residents of the west and east of Ukraine. In particular, there is a well-known narrative that namely the residents of the east and south of Ukraine are to blame for Russia attacking them, because they speak Russian and, therefore, have pro-Russian sentiments. This thesis, in various guises, has been repeatedly thrown into the information space, because it is very beneficial to the Russian mass media, as it shifts the responsibility for the invading aggression of the occupiers to those Ukrainians who speak Russian. Among the false subnarratives that contribute to the division of the population of Ukraine are those that express the opposition between Ukrainian-speaking and Russian-speaking residents. They also got into the Ukrainian communication space, in particular the Tiktok network: "My house was bombed, and when I tell the people of Lviv about it, their only reaction is: "Why not in Ukrainian?"; "In Lviv, they did not give food to a child because his mother spoke Russian", "Volunteers from Lviv do not give food to Russian speakers", "A woman in Donbas refused to feed a wounded Ukrainian soldier until he paid UAH 500". We understand that it was not actually the use of the Russian language in the Ukrainian-speaking space that caused the Russian Federation's attack on Ukraine, but geographical logistics contributed to this, because temporarily occupied or captured settlements are located mainly on the border territory.

On the Internet, in wartime, the narrative that while Southern and Eastern Ukraine is being destroyed by the invaders, the West is living a peaceful and calm life is repeatedly circulated. First of all, this thesis is broadcast in Facebook groups and Viber communities in the eastern and southern parts of Ukraine. In modern realities, we observe the falsity of this statement. There is no need to be categorical about "peaceful" life in the West, because it is impossible in the conditions of war. Western Ukrainian critical infrastructure also suffers from aviation strikes. Ukrainian men and women from this territory are also going to the front, ready to give their lives to protect their native people from Russian aggression. And the narrative that "the West of Ukraine is profiting from the internal immigrants", expressed in a wide variety of sub-narratives ("Lvivians raised the prices of apartments to profit from the victims", etc.) tries to discredit those Ukrainians who live in Western Ukraine in order to cause conflicts with the temporary displaced persons. One of the tools for the functioning of narratives is a fake, which, through fake content, broadcasts the enemy's thesis to society. The Center for Countering Disinformation at the National Security and Defense Council has repeatedly refuted fakes about "ungrateful immigrants from the East of Ukraine" who, according to provocative user reports, allegedly behave in the West "like at a resort". In order to divide Ukrainians, such information was actively disseminated in social networks. Then it turned out that the employees of the Center called all

sanatoriums and resorts of Western Ukraine to find out the real picture. The owners of the hotels reported that the displaced people behave modestly, enter the territorial defense, and actively conduct volunteer activities.

5. *Narratives of intimidation.* During the year of the war in Ukraine, the narrative “*There will be an offensive from Belarus*” is circulating in the domestic media space. Informational rumors about the preparation of an offensive from Belarus unfold each time with new force and a greater emotional effect, to which everyone is already accustomed and does not perceive such reports as real. The so-called horror rumors about a possible attack from the northern neighbor have been spreading on the Internet since the first days of the war, each time with a new date of the Belarusian invasion, cf.: “*On August 24, Russia will shell Ukraine*”, “*Belarus will attack on February 16*”, “*Tomorrow at 4 am there will be a massive attack from Belarus, the DRG will break through*”, “*February 24 there will be a massive attack from Belarus*”, and the like). This narrative covers several goals at the same time: first, to sow panic among the Ukrainian population, in particular, residents of the border area; secondly, to disorient the Ukrainian defense forces, to transfer them from other directions to the Belarusian border; thirdly, to ensure that Belarus entered the war on the side of Russia.

Among the narratives of intimidating the Ukrainian population and creating a possible panic, propagandists resort to the following ones: “*Russia is preparing a large air raid*”, “*Russia will create a humanitarian disaster in Ukraine*”, “*Ukraine will freeze*”, “*There will be a second attack on Kyiv*”.

6. *Narratives of ennobling the aggressor.* Narratives of this category also have justifying semantics, but at the same time they are designed to form a noble image of Russia through the actualized concepts of *PROTECTION, LIBERATION, CARE*. Through of the formed narratives “*Russia does not start wars, it ends them*”, “*Russia conducts a special operation, not a war*”, “*Russia only strikes military targets*”, “*Russia does not affect the civilian population*”, “*We protect*” the Kremlin tries to justify the criminal actions of the occupiers in Ukraine and shift the blame to Kyiv or the Ukrainian authorities. This position of the Russian leadership is also covered by propaganda publications: “*The decision on special operations was difficult for Putin. But there was no choice. Because people in Donbass are not stray dogs, and Russia could no longer watch them being destroyed by Ukrainian Nazis*” (O. Skabeeva, “*Russia-1*”, March 11, 2022); “*During the special operation, we strictly observe the norms of humanitarian law. Strikes are carried out with high-precision weapons against the objects of the military infrastructure of the Armed Forces of Ukraine... At the same time, everything is being done to avoid casualties among civilians*” (Shoigu, August 24, 2022).

7. *Blame shifting narratives.* Over the years, Russia has fabricated a set of false blame-shifting narratives that its propaganda system has persistently pushed into the global information environment. The Russian-Ukrainian war was no exception, because through a set of disinformation narratives, Russia, which is guilty of shelling and destruction of critical infrastructure in Ukraine, refocuses the blame for the lack of light on the central and local authorities, as evidenced by the sub-narratives “*Why is electric power supply turned off in some regions, and in others not*”, “*Oblenergo makes money: it turns off some, others – not*”, “*The government sells electricity abroad while Ukrainians sit without electricity*”, “*The mayor's shops have light, but people sit in the dark*”.

Russia, trying to transfer its guilt for waging war to the USA and NATO countries, formulates a narrative about the insufficient armed support of NATO, represented through the paradigm of sub-narratives: “*The war will continue as long as Biden is in power, because he does not provide enough weapons*”, “*Stoltenberg constantly says, that NATO will not enter the war, and therefore provoke Putin to attack*”, “*The US and NATO specifically shouted that Putin would attack, so Putin attacked*”.

After the armed aggression in the Ukrainian city of Bucha, in order to avoid responsibility, Russia launched the narrative “*Bucha is a stage*”, as evidenced by the fake news published in the propaganda media: “*Lies: the massacre in Buche - a theatrical production*” (delfi.lt.ru, April 13, 2022); “*Rudkovskaya called the accusations against Russia for the murder of civilians in Bucha fake: “Check the info!”*” (sport24.ru, April 04, 2022); “*For three days, the Armed Forces of Ukraine prepared the staging of the mass murder in Bucha*” (ura.news, April 04, 2022).

8. *Narratives of escalation of the conflict.* While since 2014, Russia reduced the scale of the conflict, localizing it in Kyiv, now the emphasis in coverage of the war in Ukraine has changed significantly. The thesis of “*protecting Donbas*” and “*denazification*” of Ukraine has taken a back seat, because the main construction has become the confrontation with the “*collective West*”, which allegedly intends to destroy Russia. This made it possible to develop the thesis structure about the need no longer for “*operations in Ukraine, but for the protection of the Motherland*”, which we read in the narratives: “*Russia is not at war with Ukraine, but with NATO*”, “*NATO troops are fighting on the territory of Ukraine*”, “*The transfer of weapons is NATO's participation in the conflict*”. This propagandistic thesis is very beneficial to the occupiers: this is how they explain their tangible defeat in the war, because they are supposedly fight against the strong states of the EU and the USA. Also, the scaling of the image of the enemy allows Russia to explain the constant mobilization measures in the country: more resources are needed to confront a stronger enemy.

Language means of suggestive influence and actualization of concepts

The formation of narratives of Russian propaganda is marked by great attention to the use of linguistic means and actualization of concepts. The analysis of the selected narrative material made it possible to identify seven ways of suggestive influence on the recipient with the help of language tools: 1) introduction into a common synonymy series, 2) citing semes, 3) statements in the form of truisms, 4) conceptual metaphors, 5) euphemisms, 6) presuppositions, 7) dehumanizing and demonizing vocabulary. Let us consider in more detail the features of each.

1. Introduction to a common synonymous series. In the scientific literature, such a method of manipulative influence is distinguished as “*anchor positioning through introduction into a synonymous series*” [29, p. 80]. The specified technology of manipulation consists in the fact that a particular lexeme is introduced into the micro-context as one of the equivalent components of a synonymous series. For example, it is common to use the words and phrases *Ukrainians, the Ukrainian army, and the Armed Forces of Ukraine* as components of a synonymous series with the core lexeme *fascists* or *Nazis*. As it was already mentioned, the Russian propaganda discourse mistakenly uses the terms *fascism* and *Nazism* as absolute synonyms. The lexemes *terrorists, extremists* as synonyms for the word *Ukrainians* are endowed with the same functional range.

2. Pointing of the seme. This technique consists in introducing a contextual seme, which is not present in the system meaning of the word. In particular, F. Bacevich notes that “*the influence of the speech microcontext causes certain shifts in the semantic-pragmatic structure of lexical units, affecting the denotative and connotative (subjective) components*” [2, p. 87]. This method is especially common in the informational and propaganda discourse, as it makes it possible to realize the corresponding positive or negative connotations within the limits of a particular concept. For example, Russian narratives such as “*Ukrainian soldiers kill/torture civilians*”, “*Armed Forces of Ukraine kill children*”, etc. give the notions *Ukrainian soldiers* and the *Armed Forces of Ukraine* the term “*murderers*”, “*executioners*”. The same function is performed by constructions with the compounds “*Ukraine oppresses*”, “*Ukraine commits genocide*”, “*Ukraine humiliates*”. In these cases, there is a reference to the concept of *UKRAINE* with a negative connotation.

At the same time, in sentences such as “*The Russian army protects Russian-speakers in the East of Ukraine*”, “*Special operation for the protection of the population of Donbas*” thanks to the micro-context, some *defenses*, ‘*protector*’ are introduced into the general semantics of the terms *Russian army*, *Russian military*. Such constructions distort information, form a false impression of the recipient about the described events, facts, and phenomena.

3. Expression in the form of truisms. The term “truism” in scientific literature is understood as “an overgeneralization, a well-known, established truth” [5]. As a synonym for the term “truism”, the lexeme *generalist* is also used - a superficial generalization repeated by everyone. That is, it is about the use of phrases that model information as an indisputable fact. In particular, well-known and true facts can be added to the message, which helps to cause a positive reaction of the recipient, to make him agree. And therefore, there is a probability that the information presented after the truism or embedded in it will also be perceived by the recipient as true. *Truisms (generalists)* also include stable constructions that seem to give information credibility (conditional), make it unquestionable: *it is clear that ...; no one will argue that...; it has long been known that...* etc., as well as expressions in the form of affirmative sentences.

In the analyzed narratives, such constructions in the form of truisms include the structure “*we had no other way out*” regarding Russia’s aggression against Ukraine, as well as affirmative sentences such as “*This regime has long ago become alien and hostile to all residents of Ukraine*”; “*The Security Council of the Russian Federation declared that Ukraine was for the West a pretext for the destabilization of Russia*” (gazeta.ru). The compounds “*long ago became alien*”, “*declared that...*” provide information in the form of a fact that is supposedly obvious and does not require proof.

4. Conceptual metaphors. The theory of conceptual (cognitive) metaphor was proposed by J. Lakoff and M. Johnson in the work “*Metaphors We Live By*” [34]. In the scientific literature, a conceptual metaphor is understood as “a stable, fixed in the linguistic and cultural tradition of the ethnic group, and therefore in the thinking of people, the use of a linguistic sign of one concept to denote another, which involves understanding the essence of the signified by analogy with the signifier” [11, p. 138]. For many years, the Russian information and propaganda discourse both uses fixed metaphors and imposes a metaphorical meaning on certain concepts, forming a clear association of certain images in the recipient. For example, the presentation of NATO as a threat to Russia in the narrative messages of the last decade can be considered as such an imposition.

A number of conceptual metaphors are used in the studied narratives – both permanent ones and those formed by the Russian propaganda discourse.

A. Metaphors representing the concept of WAR.

WAR as a GAME. In particular, this metaphor is actualized in accusatory narratives in which the blame for the war is transferred to the USA (its government), Europe, the West, and NATO, which allegedly provoke Russia.

WAR as an AGREEMENT. This metaphor is actualized in narratives such as “*Koncha-Zaspa will not be bombed, the Verkhovna Rada will not be bombed. And ordinary people are being bombed*”. With the help of such a metaphor, the imposition of the idea that the leadership of both warring countries allegedly agreed on war, and all the destruction and deaths are in vain and only peaceful people suffer from them, is realized. The actualization of such a metaphor is intended to create in the recipient a sense of the futility of resistance.

The dual metaphor of *WAR as PURIFICATION – PEACE as DEFURATION* is presented in particular in the previously described narrative “*Mariupol was purified after destruction...*”,

in which peaceful life in Ukraine is marked as defilement, while war and destruction are defined as leading to purification.

Examples of romanticizing war through metaphors were actively used in Russian propaganda discourse even before the full-scale invasion. In particular, in 2021, Russian Governor N. Komarova used the metaphors of *WAR as LOVE*, *WAR as a FRIEND*, *WAR as the FUTURE* in her speech: “*War is love. War is a friend. War is the future laid in the peace*” (N. Komarova, muksun.fm, May 09, 2021).

The range of metaphors is also used in narratives intended to divide Ukrainian society and the government. These are traditional secondary nominations, presenting war and human misery as a way for certain officials to enrich themselves. In particular, the conceptual metaphor of *WAR as a WAY TO MAKE MONEY* is actively used to blacken the reputation of the Ukrainian authorities and the higher military command. It was used in widespread fake narratives about alleged enrichment of the Ukrainian authorities and the command of the Armed Forces of Ukraine during the war.

A number of metaphors were also used to divide social groups. In particular, the actualization of the metaphor of *SOMEONE ELSE’S GRIEF as PROFIT* is aimed at accusing Ukrainians who live in territories relatively far from hostilities, that they are allegedly profiting from the plight of forced migrants by inflating housing rental prices.

B. Metaphors representing the concept UKRAINIAN LANGUAGE.

UKRAINIAN LANGUAGE as DIVISION. The action of propaganda texts is aimed in particular at ensuring that the reflexes for the concept *UKRAINIAN LANGUAGE* are concepts with negative semantics. Traditionally, for decades in Russian and pro-Russian propaganda discourses, the formation of the image of the Ukrainian language as one that divides society was common. During the period of the full-scale invasion aimed at compromising Ukrainian-speaking people, the conceptual metaphors of *UKRAINIAN-SPEAKING as INDIFFERENCE*, *UKRAINIAN-SPEAKING as AGGRESSIVENESS* were formed. Such metaphors are clearly visible in the previously described narratives, such as “*People suffered from the war, but they are forced to speak Ukrainian*”.

C. Metaphors representative of NATO/WEST/EUROPE/USA concepts

All the mentioned concepts in the Russian information and propaganda discourse are presented as a whole and have the same set of connotative terms. In particular, the following metaphors were formed: *NATO/WEST/EUROPE/USA as a THREAT*, *NATO/WEST/EUROPE/USA as AGGRESSORS*. This is one of the most common types of metaphor in Russian information discourse. Many propaganda narratives are based on the perceived threat to Russia from these countries or organizations.

D. Metaphors representative of the dual concept ATTACK-DEFENSE.

ATTACK as DEFENSE, *ATTACK as LIBERATION*, *ATTACK as ENDING WAR*, *DESTRUCTION as RESCUE* - these metaphors are used within the narratives of justification of aggression and ennoblement of the aggressor. The metaphor of *DEFENSE (of own country) as NAZISM* is fixed within demonizing narratives in which the actions of Ukraine / the Ukrainian authorities to defend their country are presented as a manifestation of Nazism.

5. Euphemisms. The term *euphemism* denotes “a purely linguistic variety of metonymy: a word, an expression, a phraseological unit that replaces prohibited (tabooed) or undesirable for certain reasons” concepts; without changing the content, it replaces the linguistic form of the statement, weakens the emotional coloring, softens its unpleasant meaning [8, p. 166]. One of the functions of euphemism is political and

ideological [22]. In the Russian information and propaganda discourse, the use of euphemisms is a common practice applied in order to reduce the negative reaction of recipients to certain political, social, and other processes. In particular, in recent years, the following lexemes and compounds with a veiling function have been recorded: “*negative economic rates*” (Russian: «отрицательные темпы экономики»), “*development with negative dynamics*” (Russian: «развитие с негативной динамикой») – instead of “economic decline”; “*inundation*” (Russian: «подтопление») – instead of “flood” (regardless of scale); “*smoke*” (Russian: «задымление») – instead of “fire”; “*plaster collapse*” (Russian: «обвал штукатурки») – instead of “destruction”; “*hard landing*” (Russian: «жесткая посадка») – instead of “air crash with victims”; “*clap*” (Russian: «хлопок») – instead of “explosion”; it is indicative that the word “*clap*” is used even in constructions where it is illogical in meaning, for example “*clap of gas*”, not “gas explosion”: “*Two people died ... after the entrance of a multi-story building collapsed as a result of a gas clap in Magnitogorsk*” (iz.ru, December 31, 2018).

In the discourse of the Russian-Ukrainian confrontation in 2022, we also record cases of euphemization with the aim of softening the perception of certain information, reducing its scope, etc. A clear example of euphemistic usage is the use of the term “*special operation (special military operation)*” instead of “*war against Ukraine*”, “*military aggression against Ukraine*”, “*invasion in Ukraine*”. Such a replacement is implied in Russia even at the legislative level: in March 2022, a law was adopted according to which “it is forbidden to use the word “war” instead of the officially approved term “special military operation” (Russian: “специальная военная операция”) [14, p. 47]. The term “special operation” in world practice means “unconventional military actions carried out by specially selected, trained, equipped units, known as special purpose forces or special operations forces. Each special operation is an attempt to solve specific problems as economically as possible. Most often, these units oppose such forms as terrorism, guerilla warfare, insurgency” [28]. At the international level, the presence of uprisings, guerilla warfare, terrorist activities, etc. in Ukraine was not determined at the time of the start of the full-scale Russian aggression on February 24, 2022. Therefore, it can be considered that the use of the term *special operation* performs a political and ideological function, replaces the word “war”, which is taboo in the Russian information field, that is, significantly reduces the scale of the event, softens its perception and hides the fact of a full-scale invasion and armed aggression. In this case, the concepts of WAR, AGGRESSION are replaced by the concept of SPECIAL OPERATION.

As it was mentioned above, also the use of the word “*clap*” instead of “*explosion*” was actualized in 2022. We observe such a replacement in Russian news reports about explosions on the territory of Russia or occupied Crimea as a result of missile attacks or attacks by unmanned aerial vehicles. The use of this ‘technique’ is based on the fact that attacks and explosions can negatively affect the effectiveness of the narrative created by Russia about the reliable security of the territories it considers its own. Therefore, there is a manipulation of the terms *explosion - clap*. Replacing the EXPLOSION concept with the CLAP concept significantly reduces the scale of the event, mitigates or eliminates the negative impact on the recipient.

In addition to the word “clap”, Russian synonymous constructions such as “*loud sounds*”, “*strong thunder*”, “*flashes in the sky*” are used. For example: “*The light went out in Belgorod and the water was turned off after a flash in the sky*” (lentafeed.com, January 11, 2023); “*Loud sounds are associated with the work of the Russian Aerospace Forces*” (iz.ru, May 06, 2022); “*Residents of the Belgorod Region heard a “clap” in the sky on the night of Thursday, April 28, at approximately 00:50*” (iz.ru, April 28, 2022).

The following examples of euphemistic substitution have been recorded: “*To go to military training*” - instead of “*participate in aggression against Ukraine*”. The euphemism is related to the claim of the Russian military, who were captured at the

beginning of the full-scale invasion, about their alleged ignorance of the real purpose of crossing the border to carry out military aggression, because they were allegedly informed about participation in military training.

The appearance of the euphemism “*Gesture of good will*”, “*step of good will*”, used instead of “defeat”, “retreat”, is connected with the fact that Russian troops lost battles for Kyiv and the region, and therefore had to withdraw their troops from these territories. In order to mitigate reputational losses, the Russian authorities positioned this fact as a gesture of good will: “*Peskov called the withdrawal of forces from the Kyiv region a gesture of good will*” (iz.ru, April 06, 2022).

Semantically close to this euphemism are the constructions “*completion of the first stage of the special operation*” (Russian: “завершение первого этапа спецоперации”) and “*cardinal reduction of military activity*” (Russian: “кардинальное сокращение военной активности”). For example: “*The Ministry of Defense of Russia announced the completion of the first stage of the special operation in Ukraine*” (kommersant.ru, March 25, 2022); “*...a decision has been made to radically ... reduce military activity in the Kyiv and Chernihiv areas*” (tass.ru, March 29, 2022). These euphemisms are designed to informationally reduce the negative resonance after Russia's withdrawal of its troops from three regions of Ukraine.

A similar function is performed by the use of the euphemisms “*regrouping of troops*”, “*operation of drawdown and organized transfer*”, “*a series of distraction and demonstration measures with the determination of real actions of troops*” - instead of “retreat”. They were used to inform recipients in a veiled manner about the retreat of Russian troops in Kharkiv direction in September 2022: “*...a decision was made to regroup the Russian troops located in the Balaklea and Izyum districts*” (tass.ru, September 10, 2022); “*... an operation was carried out to drawdown and organize the transfer of the Izyum-Balakley group of troops to the territory of the Donetsk People's Republic*” (interfax.ru, September 10, 2022).

“*Detonation of ammunition*” – instead of “*missile attack*”. The appearance of the euphemism is connected with the sinking of the Russian cruiser Moskva. According to the mass media, this happened as a result of a Ukrainian missile strike [32]. However, the Russian side stated that the death of the flagship was due to the detonation of ammunition on board: Russian. “*The cruiser Moskva, the flagship of the Black Sea Fleet, received serious damage as a result of the detonation of ammunition*” (kommersant.ru, April 14, 2022). It is significant that later this euphemism was repeatedly used to explain other cases of explosions both on the territory of the Russian Federation and in the Ukrainian regions occupied by it.

The expressions “*bungling*”, “*violation of safety technology*”, “*violation of fire safety requirements*”, which are semantically correlated with the compound “missile attack”, are related to explosions on the territory of the occupied Crimea in August 2022: “*On the spot, they believe that these are not missile strikes, but sabotage. Or even it's just bungling*” (M. Simonyan, lenta.ru, August 09, 2022); “*Only a violation of fire safety requirements is considered as the main cause of the explosion of several munitions at the Saki airfield*” (tass.ru, August 09, 2022).

“*Humanitarian missile strike*”, “*missiles of good*” instead of “terrorism” – this is how the Russian political scientist S. Markov called missile attacks on critical infrastructure objects of Ukraine: “*A large-scale humanitarian missile attack has now begun on Ukraine. Apparently, aimed to the energy system... We can say that now there are 100 Russian missiles in the sky with almost humanitarian purposes. That's what it should be called. Humanitarian strike. Missiles of goodness*” (Markov's Logic Telegram channel, December 5, 2022). The specified euphemistic units are a simultaneous allusion of Russian propaganda to the international term “*humanitarian intervention*”, used with the meaning “the threat or use of force across state borders by a state (or group of states) aimed at preventing or ending widespread and grave violations of the

fundamental human rights of individuals other than its own citizens, without the permission of the state within whose territory force is applied" [8, p. 18]. In particular, NATO's actions regarding intervention in the war on the territory of the former Yugoslavia are defined as humanitarian intervention [27, p. 13]. In the information field, the term "humanitarian bombing" is used to indicate the fact of the bombing of objects on the territory of Serbia. Namely these events are actively used by Russian propaganda to justify its aggression against Ukraine.

6. Presuppositions as a means of manipulation. Presuppositions are understood as information that cognitively precedes the statement [3, p. 6]. In pragmalinguistics, presupposition (lat. *prae* – in front, before, and *suppositio* – assumption) is considered as "an assumption or calculation that part of the information offered is obvious and/or well known to the addressee" [23, p. 90]. In the manipulative propaganda discourse, we record the "embedding" of certain information as a presupposition (that is, as obvious) in the headline text. The reader receives it on the basis of a manipulatively constructed statement.

In the following sentences, the presuppositional content involves shifting the blame for military actions to the Ukrainian government or Western countries. For example: "The Security Council called on the USA and Germany to stop the ticking of the nuclear clock" (iz.ru, January 25, 2023); "Medvedev called the cessation of US arms supplies to Kyiv a condition for the end of the conflict" (iz.ru, February 22, 2023); "Ex-EU deputy called to stop Zelensky before he starts the Third World War" (gazeta.ru, February 25, 2022); "He [Lavrov] called on the Kyiv authorities to stop the fire immediately" (lenta.ru, September 30, 2022); "Blinken opposed the ceasefire in Ukraine" (iz.ru, February 24, 2023). In the submitted headlines, the actant-subjects (the Security Council, Medvedev, MEP, etc.) allegedly play the role of revealing the truth about the causes of the war: they appeal to the actant-object with a request to influence the course of the war or its termination. In this way, the recipient should get the false impression that namely these actants-objects are to blame for the war.

Cases of such manipulation using a combination of two informative messages in a sentence, the second of which is a key one, are common. For example, in the title "In Germany, they pointed out the 'inconvenient truth' for Ukraine losing support in the West" (iz.ru, February 27, 2023) at first glance, it seems that the main message is that Germany pointed out an inconvenient truth to Ukraine. However, "embedding" in the message the meaning "losing support" emphasizes Ukraine's alleged loss of support in the military confrontation with the aggressor. Due to the combination of two messages, the second one is perceived subconsciously and is less susceptible to analysis and criticism.

We record similar semantic processes in the title "Biden can become a man from the Titanic due to the unwillingness of peace in Ukraine" (gazeta.ru, March 01, 2023), where the second message carries information that the US president allegedly does not want peace in Ukraine, and therefore, subconsciously the recipient may mistakenly perceive the USA as guilty of military actions on the territory of Ukraine.

7. Dehumanizing and demonizing vocabulary. Dehumanization in the course of military conflicts consists in the fact that each side works to deprive the enemy of its human appearance in the information field. Usually, dehumanization is manifested in actions aimed at publicly denying a person's belonging to the human race and attributing to him the characteristics of animals, things, fairy-tale characters, etc. [7, p. 252; 8, p. 3]. Linguistic works also use the term "dehumanized vocabulary" [18, p. 94]. In our research, we use the term "dehumanizing vocabulary" to denote words and constructions that contribute to the information erasure or complete deprivation of the denotation of human features.

Within the framework of the Russian-Ukrainian confrontation, Russian propaganda uses noun tokens with offensive connotations to refer to Ukrainians, for example: *hochols*, *bio-waste*, *ukrops*, *ukropithecines*. The phytomorphism "ukrops" (Russ. "укропы") became actively distributed in 2014 since the beginning of the Russian invasion of Ukraine. We will casually comment on the derivational features of the lexeme with the zoomorphic semantics "ukropithecines". This contaminated nomination is formed according to the scheme "Ukrainians + pithecines", where the word "pithecines" comes from the Greeks. πίθηκος – "monkey".

The lexeme "cannibals" is also used by Russian journalists to refer to Ukrainians: "Ukrainian Nazis have finally turned into **cannibals**" (ruinform.com, May 05, 2022), has demonizing semantics. Demonization is a form of dehumanization, however, however, it consists in the fact that the enemy is positioned as a large-scale evil that must be destroyed immediately.

In addition to nouns, dehumanizing semantics is conveyed with the help of other linguistic means, in particular, the depiction of Ukrainians as cannibals "with bloody mouths": "Every day, seeing what is happening in Donetsk, it is impossible not to worry. Thank you for tearing our people out of the **bloody mouth** of these cannibals, albeit with pain, with blood" (Russian journalist M. Simonyan in an address to V. Putin, December 20, 2022). The dehumanizing effect was also achieved by using the verb "to cleanse" (Russian: *зачистить*): "Ideally, it is necessary to liberate Ukraine, to **cleanse** it of Nazis, of pro-Nazi people and ideologies" (Press Secretary of the Russian President D. Peskov, February 24, 2022).

Therefore, the study of Russian propaganda narratives testifies to a wide selection of language tools in order to exert a suggestive influence on the recipient.

4 Conclusion

The analysis of the studied material provides grounds for classifying false messages in view of their thematic range, which serves as a basis for the selection of eight blocks: 1) despair; 2) demonization of Ukraine and Ukrainians; 3) justification of aggression; 4) split; 5) intimidation; 6) ennoblement of the enemy; 7) shifting blame; 8) scaling of the conflict. In addition, it seems appropriate to distinguish seven ways of using linguistic means of suggestive influence for the construction of Russian propaganda narratives: 1) introduction into a common synonymous series, 2) citing semes, 3) statements in the form of truisms, 4) conceptual metaphors, 5) euphemisms, 6) presuppositions, 7) dehumanizing and demonizing vocabulary. The introduction into the synonymous series and citing of seme make it possible to form additional negative connotations to the systemic meaning of the word. With the help of the actualization of conceptual metaphors, a metaphorical meaning is imposed on certain concepts, which affects the formation of corresponding images. The conceptual metaphors actualized in the researched narratives are aimed at justifying the war, disparaging Ukrainian national symbols and blaming Western countries and international alliances for the war. A peculiarity of the Russian military information discourse is the use of euphemisms, with the help of which, on the cognitive level of the recipients, it is possible to either reduce the scale of the committed negative action, or to hide the negative consequences of the actions of opponents. Suggestive tools such as constructing narratives in the form of truisms, as well as embedding the necessary information as presuppositions into the message, are effective in constructing propaganda narratives. In this way, the recipient perceives the information as obvious and undeniable. Demonizing and dehumanizing vocabulary contribute to the formation of narratives that cause hatred and justify aggression.

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Primary Paper Section: A**Secondary Paper Section: AI, AJ**

POLITICAL INSTITUTIONS OF PARLIAMENTARISM IN THE PROCESSES OF CONSTITUTING THE LOCAL CHURCH OF UKRAINE

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Abstract: The article analyzes the influence of the political institutions of parliamentarism on the formation of religious policy regarding the constituting of the Local Church of Ukraine, in the context of which the study of legislative activity is carried out in synchronous and diachronic (within the time limits of the formation of independent Ukraine) segments. Particular attention is focused on the presentation of the facts of parliamentary communication during decision-making and interaction with civil society. Based on the definition that the Profile Committee of the Verkhovna Rada of Ukraine is an important instrument of the parliament in the implementation of religious relations, the character of political communication of parties and representatives of civil society during the discussion of the relevant draft laws "On freedom of conscience and religious organizations", "On freedom of religion and religious organizations" was studied, as well as "On Amendments to the Law of Ukraine "On Freedom of Conscience and Religious Organizations"", and others. It was revealed that the politicization of the religious environment complicated the law-making process, and Ukrainian politicians and religious organizations perceived the content of draft laws on the regulation of state-church relations in different ways. The article pays special attention to the influence of the parliament on religious policy regarding the autocephaly of the Orthodox Church after the start of the Russian-Ukrainian war and its actualization after the large-scale invasion in 2022. In particular, the article shows how parliamentary activity was implemented in relation to state influence on the policy of the Orthodox Church autocephaly, which was identified by state bodies as a priority in 2016.

Keywords: political institution; parliamentarism; religious policy; Verkhovna Rada of Ukraine; Local Church of Ukraine; parliamentary communications; strategic communications.

1 Introduction

Ukraine's gaining of independence led to different approaches to the formation of the state's religious policy. Its vector directly depends on the level of functioning and autonomy of social institutions that have a high degree of trust and legitimacy, formed traditions, and also ensure the historical stability of their transmission to subsequent generations and the ability to integrate different political elites. It is a fact that religion occupies an important place in the social life of modern Ukraine, which is not overlooked by political figures and in the processes of the political system transformation. In the context of the development of the Ukrainian political system, state authorities - the President of Ukraine, the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, central and local executive bodies - pay considerable attention to religious and church issues. They determine the principles of state religious policy on a political basis and the mechanisms of its implementation in Ukraine. As a structural element of the political system, political institutions reflect the interests of socio-political and social groups and communities. Nowadays, the need to study the role and place of political institutions, primarily parliamentary ones, which influence the formation of religious policy and religious processes in Ukraine within the limits of their constitutional powers, is becoming urgent. They mainly include the parliamentary system, the executive system, the civil system, and the political party system. In particular, the institution of parliamentarism as a representative body of state power regulates relations with society and performs a law-making function, which is focused on creating laws and representing the interests of various social groups in the state.

At present, the problems of state-confessional relations are quite multilayered and belong to a wide field of interdisciplinary research. The influence of religion on the factors of ethnic, national, and civilizational identification has been studied, in particular, in the works of S. Huntington. The object of special attention of Ukrainian political scientists who study religious topics is Ukrainian Orthodoxy with a complex of intraconfessional contradictions that have arisen in the last two decades, as well as the peculiarities of the formation of relations between church official organizations and state institutions.

Certain representatives of scientific circles have repeatedly considered the possibility of forming a single independent united local church in Ukraine. It is obvious that mutual understanding of the Orthodoxy of different jurisdictions and confessions is possible only on the basis of the imperatives of mutual respect and tolerance, as well as studying and adopting the practices of developed countries based on the provision of human rights. The above mentioned processes are considered in monographic editions, for example, by S. Zdioruk, A. Kolodny. Transformational processes in Orthodoxy were the object of interest in the dissertation studies of a number of scientists: L. Prokopchuk ("*Transformational processes in the Orthodox confessions of Ukraine*"), N. Ishchuk ("*Social adaptation of Orthodoxy: a philosophical analysis*"), Yu. Nedzelska ("*The norms of life of an Orthodox layman and their transformation under the conditions of a secularized society*"), A. Marchyshak ("*Transformation of Orthodoxy in the globalized world: The post-Soviet context*"). These issues are covered in scientific publications, the authors of which consider it necessary to establish state-church relations, although without a comparative excursion into the practice of democratic (EU and the USA) and totalitarian (Saudi Arabia, Iran) countries - for example, the monograph edited by I. Tymoshenko "*State - church relations: world experience and Ukraine (historical and political analysis)*" and the work of the head of the Department of Humanitarian Policy of the National Institute of Strategic Studies S. Zdioruk "*Socio-religious relations: Challenges for Ukraine in the 21st century*".

The purpose of this article is to investigate the influence of political institutions of parliamentarism on the formation of religious policy regarding the attempts of constituting of the Local Church of Ukraine. The main tasks are the study of legislative activity in synchronous and diachronic segments, the implementation of parliamentary communication when making decisions, and in interaction with civil society.

2 Materials and Methods

The methodology of research determines an objective descriptive approach, according to which the subject of research is considered independently of the will of individuals, based on the search for facts that determined the events under study. As part of this approach, general scientific methods of content analysis and discourse analysis are used. In the course of the study, an institutional approach was also used, which predetermined the consideration of state-confessional relations at the level of interaction between government institutions and religious associations.

3 Results and Discussion

Institutes of executive power are represented by state bodies and officials who manage public affairs. The highest body in the system of executive bodies in Ukraine is the Cabinet of Ministers of Ukraine (Government of Ukraine), which exercises executive power directly and through ministries, other central bodies of executive power, and local state administrations. The government directs, coordinates, and controls the activities of these bodies. It is responsible to the President of Ukraine and the Verkhovna Rada of Ukraine, controlled and accountable to the Verkhovna Rada of Ukraine within the limits stipulated by the Constitution of Ukraine [8].

The institute of citizenship defines the mutual rights and obligations of the state and the citizen. At the same time, the institution of political parties ensures the orderliness of relations formed in the process of creating political organizations and the interaction between them [7]. Therefore, a component of their activity is the coordinated functioning of the state with all its administrative structures and institutions, activities of political parties and movements, activity of public and political opinion,

functioning of mass media, diverse influence on the part of political elites and political leaders.

An important structural unit of the political system of Ukraine is the Verkhovna Rada of Ukraine, which has constitutional powers, in particular, to regulate social relations in the field of religion. First of all, this is expressed in the determination of the principles, methods, and mechanisms of formation and implementation of state-church and inter-confessional relations [3]. The regulatory function in the formation of the religious policy strategy is included in the authority of the parliament to listen to the annual and extraordinary messages of the President of Ukraine, where the issues of state-church and interfaith relations are raised. In addition, the Verkhovna Rada of Ukraine directs activities in the religious sphere through the mechanism of parliamentary hearings and inter-factional parliamentary associations on church issues.

An important instrument of the parliament in the implementation of religious relations is the relevant Committee of the Verkhovna Rada of Ukraine, which is formed from the number of people's deputies of Ukraine to carry out legislative work in separate areas, preparation and preliminary consideration of issues that are within the powers of the Verkhovna Rada of Ukraine, and the performance of control functions [9]. State policy in the field of freedom of conscience and religious organizations is implemented by the specialized committee of the Verkhovna Rada of Ukraine on culture and spirituality: "The committee, acting as an active defender of the principle of equality of all churches and religious organizations in Ukraine, has always taken into account the position of religious organizations in its legislative work and will continue to take into account the position of religious organizations" [18]. The Profile Committee carries out preliminary consideration of proposals for holding parliamentary hearings on religious issues.

Cooperation between the Verkhovna Rada and religious organizations at the legislative level was not always productive. In particular, in 2003, during the preparation of the draft of the new Law of Ukraine "On Freedom of Conscience and Religious Organizations", the Chairman of the Verkhovna Rada V. Lytvyn postponed consideration of the draft law due to the politicization of this issue by some representatives of religious organizations [15]. However, the Verkhovna Rada Committee on Culture and Spirituality received an alternative draft law "On Freedom of Religion and Religious Organizations" from People's Deputy L. Hryhorovych, which, according to the Regulations of the Verkhovna Rada of Ukraine, had to be considered simultaneously with the government draft [10]. In connection with the protests of religious organizations, consideration of draft laws was postponed four times, and in the end the Verkhovna Rada rejected them. People's elected officials decided that "these documents are not prepared properly and therefore create a conflict situation in the Verkhovna Rada and a certain tension in society" [15].

However, attempts to reform religious legislation did not stop. In 2004, the draft Law of Ukraine "On Freedom of Religion and Activities of Religious Organizations" was submitted for consideration to the Verkhovna Rada of Ukraine by I. Stoyko, a People's Deputy from the "Nasha Ukraina" ("Our Ukraine") faction [20]. The presentation of the draft law was criticized by Metropolitan Volodymyr (Sabodan), who in a letter to the Chairman of the Verkhovna Rada of Ukraine V. Lytvyn insisted not to submit it to the parliament for consideration, as it is less democratic than the current law. During 2004-2005, the parliament limited its activity in this area to consideration of changes to certain articles of the current Law.

In 2005, the Verkhovna Rada rejected the project of the Law "On Amendments to the Law of Ukraine "On Freedom of Conscience and Religious Organizations"" submitted by People's Deputy O. Turchynov [21]. In the same year, the draft law "On Amendments and Additions to the Law of Ukraine "On Freedom of Conscience and Religious Organizations"" by People's Deputy of the Socialist Party of Ukraine V. Spivachuk was registered. In response to the previously rejected bill project,

People's Deputy O. Belorus from the BYU (Block of Yulia Tymoshenko) faction noted that the latest draft law "may lead to tension in inter-church relations and, as a result, in society. In addition, if adopted, it will become a legal basis for prosecuting citizens on the basis of religion" [21].

The preparation of the new Law in the field of state-church relations began in 2006. To develop a new version of the Law "On Freedom of Conscience and Religious Organizations", a working group was created, which included representatives of the Ministry of Justice, the All-Ukrainian Council of Churches and Religious Organizations, the Department of Religious Studies of the Institute of philosophy of the National Academy of Sciences of Ukraine, the International Association of Religious Freedom, the Institute of Religious Freedom, the Ukrainian Center for Economic and Political Research named after O. Razumkov, and other non-governmental organizations. However, the new law did not receive approval from various political and religious forces. Representatives of certain churches made a proposal to postpone the date of submission of the mentioned project for consideration by the Verkhovna Rada "in view of the unfavorable political situation and the politicization of religious issues" [15].

Therefore, the Verkhovna Rada of Ukraine, through the Profile Committee and people's deputies of Ukraine, can significantly influence the formation of the foundations of religious policy and ensure control over the observance of rights in the sphere of freedom of conscience and religion. However, the politicization of the religious environment complicated the law-making process, and Ukrainian politicians and religious organizations themselves perceived the content of draft laws on the regulation of state-church relations in different ways. The inconsistency of a number of laws that were considered by the Verkhovna Rada of Ukraine led to the escalation of conflicts, public unrest, which was accompanied by protests outside the walls of the Ukrainian parliament. Participation in the protests by representatives of various religious organizations and political forces led to the aggravation of both religious and political confrontation in Ukrainian society.

The question of the autocephaly of the Orthodox Church in Ukraine, which was one of the main issues in the work of the Committee on Culture and Spirituality, caused special tension within the walls of the Verkhovna Rada. However, the acquisition of local status by the Orthodox Church was a priority in the work of the Verkhovna Rada during P. Poroshenko's presidency. In the summer of 2016, the Verkhovna Rada of Ukraine published the "Address of the Verkhovna Rada of Ukraine to His Holiness Bartholomew, Archbishop of Constantinople and New Rome, Ecumenical Patriarch regarding the granting of autocephaly to the Orthodox Church in Ukraine", which became a significant step in striving of the then president pro-government political forces to receiving Tomos. People's deputies were convinced that in the conditions of armed aggression by the Russian Federation, only "autocephalous status can become the basis for overcoming the existing church division in the country and preserve the integrity of the Ukrainian people, which will allow them to take their proper place in the family of local Orthodox churches" [5].

The issue of the unity and autocephaly of the Orthodox Church was the main topic at the meeting of the Chairman of the Verkhovna Rada of Ukraine A. Parubiy with the secretary of the Holy Mountain monastery Athos Kutlumush and Hierodeacon Chrysostom, who at that time were in Kyiv. As A. Parubiy noted at this meeting, the Appeal to Patriarch Bartholomew regarding the autocephaly of the Ukrainian Church "is not only a matter of a religious nature, but also a matter of national security, because there is both military aggression and interference in the spiritual space" [12]. At the same time, the Chairman of the Verkhovna Rada of Ukraine noted that "Parliament, secular authorities do not intend to interfere or regulate religious life" [12].

Andriy Parubiy also in the international arena manifested his active support to the granting of autocephaly to the Ukrainian Orthodox Church. In particular, the Chairman of the Verkhovna

Rada, while in Georgia on the occasion of the celebration of the independence of the First Republic of Georgia, noted that he “plans to discuss the issue of supporting the autocephaly of Ukraine with the President of Georgia, the Speaker of the Parliament, and His Holiness Patriarch Ilya II”. He expressed hope for assistance from the Georgian Orthodox Church in this process: “we are very much counting on the support of both the Patriarch and the Georgian Orthodox Church for the aspiration of Ukraine and all Ukrainians to create a Ukrainian Orthodox autocephalous church” [14]. Ukraine's desire to create a Local Church in the face of Russia's military aggression was shared by certain circles in the United States of America, claiming that “Putin's hybrid war has many components, where the military component is important, but the informational and humanitarian ones are no less important, and he uses these spheres effectively and dangerously” [2]. Brownback, the US State Department's Special Envoy for International Religious Freedom Affairs, noted that “Ukraine faces a big issue - the autocephaly of the Ukrainian Local Orthodox Church. We do not interfere at the stage of making a decision on granting the Tomos on the autocephaly of the Ukrainian Orthodox Church, but ... we will be happy to help” [2]. Citing these facts of support, however, it should be noted that the prerogative of making final decisions on matters of ensuring citizens' rights and national security belongs to national authorities, subject to consultations with representatives of civil society and taking into account all systemic factors, in particular the level of support for certain denominations from Ukrainian society, participation of the confessions themselves in social processes, their civil position during Russian war aggression, participation in humanitarian volunteer activity, etc.

Already in 2018, A. Parubiy presented in the parliament a draft Resolution on support for the appeal of the President of Ukraine to the Ecumenical Patriarch Bartholomew regarding the granting of a Tomos on the autocephaly of the Local Orthodox Church in Ukraine: “The President of Ukraine appealed to the Parliament to support his Appeal to the Ecumenical Patriarch with a request to grant the Orthodox Church in Ukraine Tomos on autocephaly” [18], which created a precedent that is of interest for further research both in international law and in public and common law. The Chairman of the Verkhovna Rada noted that the Parliamentary appeal after a long time gave impetus to the consideration by the Ecumenical Patriarchate of the issue of Autocephaly of the Local Orthodox Church in Ukraine. At the same time, he said, the address of the President of Ukraine continues and develops the process of creating the Local Ukrainian Orthodox Church, the previous milestone of which was the Address of the Verkhovna Rada of Ukraine dated June 16, 2016 regarding the granting of autocephaly to the Orthodox Church in Ukraine: Patriarch Bartholomew claimed that Church canons state every nation, every Independent State has the right to its own independent Church [18].

The co-authors of the project were the speaker of the Verkhovna Rada A. Parubiy, the first vice-speaker I. Gerashchenko, the leaders of the factions A. Gerasimov (“Block of Petro Poroshenko”), M. Burbak (“People's Front” faction), Yu. Tymoshenko (“Fatherland” faction), O. Lyashko (Radical Party faction), O. Berezyuk (“Samopomich” (Self-Help) faction), as well as the president's representative in the Verkhovna Rada, member of Block of Petro Poroshenko faction I. Lutsenko, and other parliamentarians. Thus, the Verkhovna Rada of Ukraine decided to support the precedent-setting appeal of the President of Ukraine to the Ecumenical Patriarch Bartholomew on the granting of a Tomos on the autocephaly of the Local Orthodox Church in Ukraine.

Instead, people's deputies from the Opposition Bloc (V. Novynskyi and O. Dolzhenkov) initiated a submission to the Constitutional Court, where they declared that they consider the Verkhovna Rada's resolution to support the appeal of the President of Ukraine Petro Poroshenko to grant autocephaly to the Ukrainian Local Orthodox Church illegal: “Ukrainian Orthodox Church, which has a canonical connection with universal Orthodoxy, did not appeal to Patriarch Bartholomew

with a request to grant autocephaly to the Orthodox Church in Ukraine, and neither the President of Ukraine nor the deputies of the Verkhovna Rada of Ukraine were authorized to do so. The question of granting church autocephaly belongs to the competence of canon law, and not to the competence of state laws. Autocephaly is granted to the church, not the state, and therefore the Church, not the state, should initiate or ask for this status [4]. In addition, the Supreme Court of Ukraine received lawsuits protesting the actions of state bodies in the process of acquiring church autocephaly. The first lawsuit was from the religious organization “Religious community of the Ukrainian Orthodox Church at the church named after St. Nicholas of the Berdyansk Eparchy of the city of Berdyansk, Zaporizhzhia region” to the Verkhovna Rada of Ukraine, where the plaintiff requests that the Verkhovna Rada of Ukraine's resolution No. 241-VIII dated April 19, 2018 “On support of the appeal of the President of Ukraine to the Ecumenical Patriarch Bartholomew on the granting of a Tomos on the autocephaly of the Orthodox Church in Ukraine” be declared illegal and annulled. Also, the Verkhovna Rada of Ukraine received statements from the Horodnytskyi St. George's Male Stavropygian Monastery and Bishop Makarivskyi, Vicar of the Kyiv Metropolitanate, Vicar of the Tithe Monastery of the Nativity of the Most Holy Theotokos of the City of Kyiv of the Ukrainian Orthodox Church to the Verkhovna Rada of Ukraine regarding recognition of the resolution as illegal and cancellation of it [1].

In response to an appeal regarding state interference in the sphere of religious relations, the Constitutional Court noted that “it is not within its competence to evaluate such documents from the point of view of constitutionality, since Resolution of the VRU dated April 19, 2018 No. 2410-VIII certifies the political position of the parliament, supporting the appeal of the President of Ukraine to the Ecumenical Patriarch with a request to provide the Orthodox Church of Ukraine with a Tomos on autocephaly” [16]. Today, however, the processes taking place indicate the need for the development of mechanisms for expanding the competences of the Constitutional Court of Ukraine, to ensure the possibility of providing a constitutional assessment of draft laws adopted by Verkhovna Rada on such important issues of national security, including against the background of preventing the emergence of tensions and divisions in society, especially in conditions of the need to defend the country against armed aggression by the Russian Federation.

Another conflict between the institution of parliamentarism and religious organizations arose after the Verkhovna Rada adopted Law No. 2662-VIII “On Amendments to the Law of Ukraine “On Freedom of Conscience and Religious Organizations”” regarding the name of religious organizations (associations) that are part of the structure of a religious organization (association), the management center (management) of which is located outside Ukraine in a state recognized by law as having carried out military aggression against Ukraine and/or temporarily occupied part of the territory of Ukraine. This Law clearly defined three signs of religious subordination: if the statute of a Ukrainian organization mentions subordination to a foreign center; if the charter of a foreign religious center mentions the subordination of the organization in Ukraine; if the statute of the foreign center mentions that the representative of the Ukrainian organization is part of the management of the foreign center [11]. The law establishes that “if within four months (for religious communities - nine months) from the date of entry into force of this Law and/or the entry into force of a law by which a foreign state is recognized as having carried out military aggression against Ukraine and/or temporarily occupied part of the territory of Ukraine, the religious organization (association) did not make the legally required changes to its official name and did not submit the corresponding changes to its charter (regulations) for registration, its charter (regulations) becomes invalid in the part that determines the full official name of religious organization (association)” [11].

Supporters of the OCU enthusiastically met the decision of the Verkhovna Rada, believing that this law will contribute to the prevention and neutralization of real and potential threats to

national security. Instead, the UOC and a group of deputies of the Opposition Bloc challenged the Law in the Constitutional Court of Ukraine. Already in January 2019, they sued a constitutional submission, which the court accepted, but postponed its consideration twice. Two days before the second round of the presidential elections of Ukraine, another meeting of the Constitutional Court on this issue was supposed to take place, but the case was not considered. Taking into account the fact that it is impossible to annul the law through the Constitutional Court, the Ukrainian Orthodox Church filed a lawsuit in the District Administrative Court of the city of Kyiv to declare the order of the Ministry of Culture on conducting a religious examination illegal. The court's decision contributed to securing a lawsuit, which was prohibited from taking any actions regarding the registration of religious centers of the UOC [6].

In the conditions of a full-scale invasion of the Russian army, the Chairman of the Verkhovna Rada of Ukraine R. Stefanchuk announced that the parliament will not vote on the draft law on the prohibiting of the Russian Orthodox Church in Ukraine in order to protect the national security, sovereignty and territorial integrity of Ukraine, prevent collaborationism, stop inciting inter-religious enmity and destabilization of religious environment in Ukraine. This issue has been discussed for a long time within political factions and groups. People's deputies came to the conclusion that during the war they have no right to adopt any law that divides Ukrainian society. According to the speaker, "first, it is needed to see who and how behaved during the war. Because the war is the situation that today shows everyone who is who, that tears off the veils from everyone: from patriots, from pro-Russian politicians. And society can really see who is for Ukraine, and who has other intentions" [17]. Therefore, we can state the emphasis on communication with civil society and religious organizations in the preparation of the legislative framework that will regulate state-church relations on the basis of national interests, including issues of national security, while simultaneously focusing on reaching a reasonable compromise between the interests of the relevant organizations. Such a position, in fact, records the presence of strategic political issues, but the absence of developed mechanisms for solving them.

4 Conclusion

Therefore, the religious policy of the state in the Orthodox environment largely depends on work in the legislative field, including the development of legislative mechanisms involving the Constitutional Court to resolve urgent issues of national security, based on the best practices of world political and legal experience. Laws of Ukraine, which have been adopted by the Verkhovna Rada of Ukraine in recent years, in general meet public demands. However, the implementation of the adopted decisions does not take place to a sufficient extent in practice, which leads to unjustified miscalculations of sensitive areas such as freedom of conscience and freedom of religion within the framework of national policy. This is caused both by the lack of a consolidated position on the degree of state intervention in church relations, by the action of "interest groups", and by the lack of legally established, and therefore civilized and open lobbying mechanisms, in the context of today's wartime challenges. At the same time, the responsibility of the institution of the parliament for making decisions taking into account all procedural aspects is noted, which makes their further delegitimization impossible. In further research, it is worth, in our opinion, to analyze the specifics of the implementation of religious policy both towards the Local Church and towards other religious communities and confessions by executive bodies of state power, taking into account all systemic connections, requirements of international law (in particular, the International Covenant on Civil and political rights), social challenges, and the nearest prospects of Ukraine's acquisition of EU membership.

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INNOVATION IN PROFESSIONAL TRAINING OF UNIVERSITY UNDERGRADUATES IN UKRAINE WITHIN THE CONTEXT OF NEW EDUCATIONAL REALITIES

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Abstract: The actuality of the study is proved with the fact in the conditions of strengthening globalization trends, internationalization of the economy, education and culture, the processes of Ukraine's integration into the intercultural space and the expansion of its economic ties, the issue of increasing the professional level of modern university undergraduates is acute. Ensuring the innovative development of the higher education, bringing it to the level of European and world quality is possible under the conditions of modernization of the training of university undergraduates, aimed at educating specialists capable of effective cross-cultural interaction with foreign partners and clients, presenting skills and knowledge at the international level, studying innovative experience of foreign countries in certain professional field. A methodical process of gathering and analyzing specific information to provide solutions to relevant educational questions and evaluate pedagogical outcomes and results implied theoretical and case study methods. This method of research, which is actually combined research, encompassed collecting data of a sensitive nature. In our survey, combined research can be described as a multipurpose quantitative data collection method. The results of the pedagogical survey concluded that the following components of professional training of university undergraduates were identified: motivational-valuable, cognitive-knowing, and cross-cultural-behavioral.

Keywords: case study method; combined research; undergraduates; intercultural communication; professional training; modern university; professional development.

1 Introduction

Institutions of higher education have the main task of adapting to the requirements of the globalization era. It is worth emphasizing that a modern competitive university must constantly take into account modern changes in society in relation to cultural, scientific, and technical development, in order to be able to 'find itself' in the realities of today.

Cultural-educational and scientific-technical integration is determined by the potential opportunity to achieve significant success in the integration process in these directions. They cover the fields of higher education, retraining of personnel, science, culture, art, technical and technological spheres [5; 10; 11].

The integration process in the relevant directions in Ukraine consists in the implementation of European norms and standards in education, science and technology, the dissemination of Ukrainian cultural, scientific, and technical achievements in the European Union. In the final result, such steps will contribute to the improvement of European cultural identity in Ukraine and integration into the European intellectual, educational, as well as scientific and technical environment [6; 7].

The modern demands placed on specialists by employers and consumers of different social services are determined by competition in the labor market. That is why the professional training of specialists in this field should be aimed at ensuring a high level of their theoretical and practical skills, readiness to carry out professional, as well as communicative interaction with consumers of all services. Academician N. Nychkalo expresses the opinion, cited even by various authors, that one of the most important aspects of professional education in Ukraine is the substantiation and research of the cultural foundations of professional education [15; 23].

The purpose of the article is to study theoretical, as well as practical grounds of intercultural communication skills and professional preparation of university undergraduates in modern educational environment.

In particular, the main tasks of the ongoing study are to single out three core components of professional training of the university undergraduates: motivational-valuable, cognitive-knowing, and cross-cultural-behavioral application. Consequently, the presence of these components in future professional activity will intensify the working process and make it more efficient, resourceful, and competitive.

2 Materials and Methods

The methodological basis of the study is a set of principles and approaches that determine the methodological guidelines of cross-cultural education of Master's students the field of tourism, including: the principle of unity of theory and practice; principle of certainty; the principle of specificity, the principle of cognizability, the principle of objectivity, principle of causality, principle of general development. It also implies the principle of general communication, the principle of dialectical contradiction, the principle of dialectical negation, the principle of historicity, the principle of systematicity, the principle of unity of analysis and synthesis, the principle of the unity of the historical and the logical, the principle of going from the abstract to the concrete, the principle of determinism and historicism, objectivity. In the study, we focused on the integration of the following approaches:

- Systemic, which enables the study of the components of cross-cultural education and their interrelationships and creates the basis for the development of recommendations for improving the training of specialists in the field of tourism in Ukraine;
- Performing, which consists in a value attitude to the subject-oriented organization and management of students' educational activities, contributes to the restructuring of the procedural and technological aspect of the educational process with the aim of mastering the skills of professional and practical activity in its holistic perception by its participants;
- Personally-oriented, which involves the formation and development of personal qualities of future specialists in the field of tourism, taking into account their motives, abilities, activity, intelligence, individual psychological and functional needs; directs the training of future specialists in the field of tourism to the students' motivated acquisition of cross-cultural knowledge, abilities and skills for future professional activity in the conditions of European integration;
- Synergistic, based on scientific ideas about the world as an interaction of complex systems, providing conditions for self-organization of future specialists in the field of tourism during adaptation to real professional activity in the new conditions of European integration processes;
- Competence-based, which is decisive in the process of formation of practical competences (in particular, communicative, foreign language, information ones) of specialists in the field of tourism, taking into account the specifics of their professional activity, necessary for effective participation in the labor market and for the purpose of self-improvement throughout life;
- Cultural, which represents one of the system-forming approaches and enables an objective comparative-pedagogical analysis of the processes taking place in European society in general and in education in particular (see Figure 1) [3; 13; 19; 20].

Moreover, in the frame of ongoing pedagogical survey, case study method was applied. Case study method was used to find more information through carefully analyzing existing cases. It

was included into research to gather empirical evidence for investigation purpose. It is a method to investigate a problem within its real life context through existing cases, for example professional training outcomes of university undergraduates.

We had to carefully conduct analysis, making sure the parameter and variables in the existing case are the same as to the case that is being investigated. Using the findings from the case study, conclusions can be drawn regarding the topic that was being studied [19].

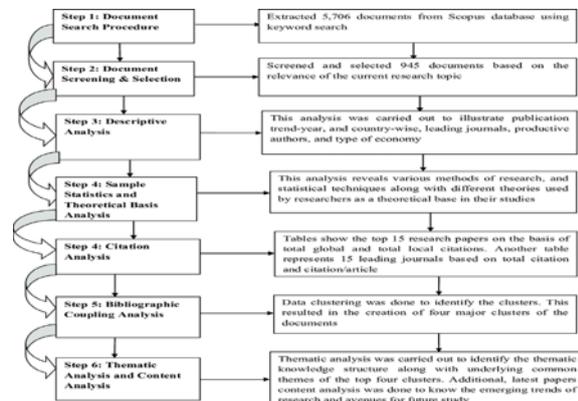


Figure 1. Steps of ongoing scientific research

Both Ukrainian and foreign scientists pay attention to the questions of theoretical research in the category of “cross-cultural competence”. Among them, the works of E. Hall, R. Levis, G. Hofstede, F. Trompenaars, K. Girtz, and Y. Koivisto made a significant contribution to the research. Among Ukrainian scientists, interesting studies were conducted under the authorship of N. Meshko, O. Buryak, and M. Ryzhenko [32; 36].

According to the definition of S. Ting-Tuma, a professor at California State University, who specializes in the study of issues of human communication research, the concept of “intercultural communication” serves to denote the process of communication between members of different cultural communities. In addition, the scientist notes that this term also includes the group interaction of a number of factors: beliefs, values, norms and scenarios of their interaction [38; 39]. We are impressed by the opinion of T. Novinger, who notes that intercultural communication is a transactional, symbolic process that involves establishing a connection between people of different cultures. Moreover, as M. Bennett aptly noted, people during intercultural interaction must accept different culturally conditioned ways of thinking and behaving, even if they may not like them [10; 13].

In general, adequate intercultural communication is a process that involves full mutual understanding of partners during communication, that is, the information, thought, idea conveyed by one communicator is correctly understood, comprehended by others, and, therefore, he can correctly react, act, give correct, expected answer, reaction. Adequate mutual understanding is one of the integral components of the process of intercultural communication.

Ko et al. claim that intercultural communication must necessarily be conditioned by the interaction of partners of different national cultures, during which, in accordance with established norms, information, images of consciousness, samples of culture, activity are exchanged and mutual understanding is achieved. It follows that with the help of the described process, individuals from two different cultural communities agree on a common meaning in a communicative situation [16].

The conducted study proves that the majority of scientists insist on the need to focus on the close connection between language and culture in the process of studying the problems of intercultural communication (O. Sadokhin, R. Porter, L. Samovar, S. Ter-Minasova, E. Hall) (see Figure 2) [19].



Figure 2. Ten strategies for effective cross-cultural communication

Foreign language classes become the bridge that helps future specialists find ways to understand and cooperate with speakers of another language, representatives of another culture, traditions, and customs. It allows regulating cultural and linguistic contacts in an intercultural environment. Some works cite S. Ter-Minasova, who emphasizes that in order to learn a foreign language as a means of communication, it is necessary to create an atmosphere of real communication, to establish a connection between teaching foreign languages and life (see Figure 3) [17; 20].

Interpersonal Skills	Team Effectiveness	Cultural Uncertainty	Cultural Empathy
<ul style="list-style-type: none"> Ability to acknowledge differences in communication and interaction styles Ability to deal with misunderstandings Comfort when communicating with foreign nationals Awareness of your own cultural conditioning Basic knowledge about the country, culture, and the language of team members 	<ul style="list-style-type: none"> Ability to understand and define team goals, roles, and norms Ability to give and receive constructive feedback Ability to discuss and solve problems Ability to deal with conflict situations Ability to display respect for other team members Participatory leadership style Ability to work cooperatively with others 	<ul style="list-style-type: none"> Ability to deal with cultural uncertainty Ability to display patience Tolerance of ambiguity and uncertainty due to cultural differences Openness to cultural differences Willingness to accept change and risk Ability to exercise flexibility 	<ul style="list-style-type: none"> Ability to see and understand the world from others' cultural perspectives Exhibiting a spirit of inquiry about other cultures, values, beliefs, and communication patterns Ability to appreciate dissimilar working styles Ability to accept different ways of doing things Non-judgmental stance toward the ways things are done in other cultures

Figure 3. Core intercultural skills by S. Ter-Minasova

Scientific studies on cross-cultural communication carried out by English scientists R. Benedict, M. Bennett, M. Byram, E. Hirsch, and L. Storti indicate the strengthening of the cross-cultural component of individual elements of education - national, regional educational systems, that is, in the process of cross-cultural interaction, the formation of a new international educational environment is taking place, where the national interests of its participants could be realized in the most effective forms, and modern searches for solutions to problems of vital importance for human civilization as a whole could be carried out [3; 13].

Therefore, the comprehensive training of university undergraduates for cross-cultural interaction, aimed at understanding the logic and norms of the contexts of other cultures, is necessary and promising, taking into account the processes of increasingly dynamic integration of national educational spaces (see Figure 4).

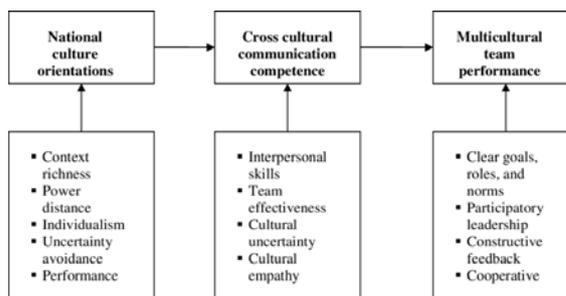


Figure 4. University undergraduates' competencies in cross-cultural messaging

The problem of the influence of social demand on the content of programs of specialists professional training, the issue of the connection of professional education with the labor market are the sphere of scientific interest of such scientists as K. Bidwell, K. Galbraith, C. Kasipar, S. Kleiner, Z. Rahim, M. Tien, L. Haddad, R. Hermes. The review of sources shows that the problem of professional training of specialists is sufficiently developed in modern scientific literature. The authors of a number of scientific surveys conducted a thorough analysis of research and publications on this topic, distinguishing different approaches to defining the concept of "professional training" (L. Biryukova, I. Glazkova, N. Demeshkant, V. Kuleshova, L. Polishchuk, O. Tomashchuk, A. Adamu, M. Bello, I. Danjuma, G. Moody [4; 10; 13; 24; 32].

The analysis of scientific research in the field of professional training of specialists confirms the relevance and multifacetedness of this problem. However, it should be noted that only some researchers conceptually approach the definition of the concept of professional training of university specialists.

The opinion of Vasylyshyna, related specifically to the field of tourism education, deserves attention: it implies understanding of the professional training of future specialists as a process that reflects scientifically and methodically based measures of higher educational institutions aimed at forming, during the training period, the level of professional competence and personal competence sufficient for successful work in all areas of the tourism sphere, taking into account the modern requirements of the labor market [36].

Based on the dictionary definition of professional training, Wahid et al. note that the training of a specialist involves not only mastering knowledge and developing skills in some area, but also the formation of personal culture [38].

This position is confirmed by the opinion of the Turkish scientist J. Avdzikurt (sited by Ko et al. (2013)), who emphasizes that the statement regarding the need to orient the professional training of specialists to the operational needs of the certain sector, taking into account the importance of developing interpersonal communication skills and relations with clients, is generally recognized (see Figure 5) [16].



Figure 5. Professional training – path to future success

3 Results

Based on the above presented analysis of the national and European modern researches, it is appropriate to highlight the following components of the training of the university undergraduates in the educational system of Ukraine, such as: motivational-valuable, cognitive-knowing, and cross-cultural-behavioral.

The motivational-valuable component implies the presence of a positive and tolerant attitude to intercultural interaction, awareness of the importance of the moral and spiritual values of own culture and the culture of other nations, the presence of interest in the cultural characteristics of other countries and interest in successful communication, which in turn determines the emergence of sustainable motivation to implement intercultural interaction. In addition, a high level of formation of mental processes of perception, attention, thinking, and emotional manifestations is important.

Motivation is a driving force that encourages activity and gives direction to this activity, which is aimed at achieving the set goals. Modern psychology considers motivation as a complex combination of driving forces of behavior, which is revealed to the subject in the form of needs, interests, goals, ideals and directly determines the activity of the individual. The specified component of readiness for intercultural communication includes the concept of tolerance [22; 27].

Tolerance in the context of intercultural communication is, first of all, a respectful attitude to the diversity of cultures in the world, to the cultural characteristics of the communication partner, to those different from one's own norms of behavior and expression of opinions. Tolerance involves the ability of communicators to perceive certain facts from another culture, especially if they differ from the norms and customs of their own culture, which leads to the desire to understand and accept a different point of view without conflict (see Figure 6) [24; 28].



Figure 6. Undergraduates' skills in motivational-valuable component fulfillment

Moreover, intercultural communication, as a two-way process, presupposes the presence of a tolerant attitude and a desire for mutual understanding in all participants of intercultural communication. The motivational-valuable component of readiness for intercultural communication contains two components: motivational and valuable, the content of which can be revealed with the help of certain characteristics:

- 1) A desire to cooperate with representatives of other cultures and expand communicative contacts; interest in studying the cultural characteristics of different countries, their traditions, language, history; the desire to create a positive emotional atmosphere in communication, to understand the interlocutor; resistance to conflicting intercultural situations and the ability to predict a positive solution to them;
- 2) Self-awareness as a representative of a certain culture; understanding the national characteristics of own culture; respectful attitude towards other cultures and cultural characteristics of their representatives (tolerance); recognition of the importance of spiritual and moral values of other peoples (see Figure 7) [3; 4; 29].

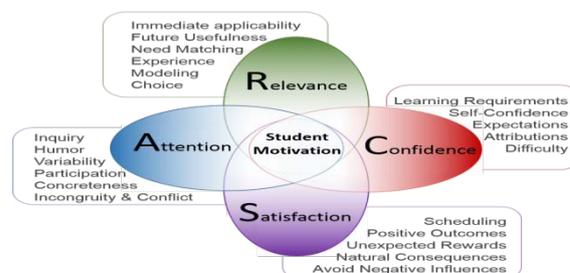


Figure 7. Undergraduates' motivation outcomes

The cognitive-knowing component contains a set of knowledge about intercultural communication, the essence and peculiarities of this process, as well as knowledge about the role of culture for

man and society, about the peculiarities of communication processes in a multicultural environment, about the place of intercultural communication in certain professional area [9].

In addition, this component assumes the presence of linguistic and sociocultural knowledge and special knowledge about the peculiarities of management. The structure of the cognitive component contains several main groups of knowledge, which are revealed by a number of characteristic components, and which the future tourism manager should possess (see Figure 8) [32; 39].

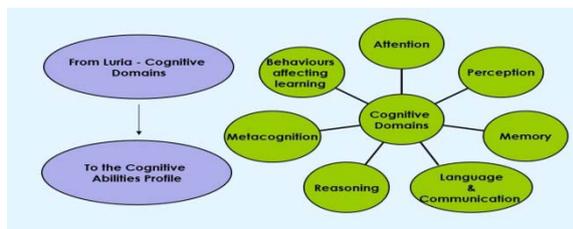


Figure 8. Cognitive domains of the cognitive-knowing component

Moreover, cognitive component implies the following:

- 1) Knowledge of the peculiarities of intercultural communication: knowledge of the content of the concept of "intercultural communication"; individual components of this phenomenon (concepts of culture and communication, their relationship, the place of language in this process); knowledge of the peculiarities of the communication process; communicative strategies and communication styles; techniques of verbal and non-verbal communication [16; 19].
- 2) Sociocultural knowledge about: elements of different cultures and their features (history, customs, traditions, language, norms of behavior); social norms of behavior determined by a certain culture; national and cultural features of speech behavior of representatives of other cultures and own culture; stereotypes and their impact on the communication process [16; 24].
- 3) Linguistic knowledge: knowledge of the grammatical structure of a foreign language; lexical composition of the language used for intercultural communication; semantic features of foreign language lexical units, their cultural component; linguistic stylistic techniques; awareness of the connection of lexical units with the cultural values of the people [13; 17].
- 4) Knowledge of the specifics of the manager's activity and the role of intercultural communication in it: knowledge of the basic concepts of management area, the regulatory and legal framework for the development of management in Ukraine; tasks and functions of the manager and their understanding; management strategies; basic concepts of management; technologies for the development and organization of international tourist routes; norms of business etiquette and rules of business communication (see Figure 9) [4; 8].

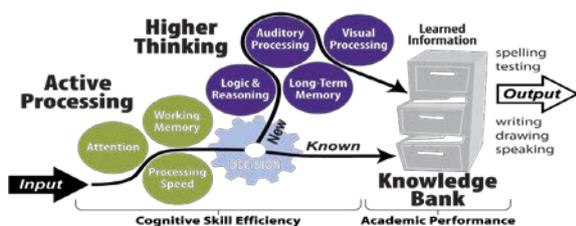


Figure 9. Skill formation process of the cognitive-knowing component

Thus, the main groups of knowledge that we have highlighted, which the future specialist should possess, create a cognitive base of communication - a leading activity in chosen area.

The cross-cultural-behavioral component of readiness for intercultural communication involves the specialist's possession of communicative competence and certain skills, which allows the specialist to successfully carry out professional activities, professional-business and interpersonal communication.

Communicative competence represents an integral component of professional activity and includes the ability to use a foreign language to achieve professionally significant goals [8; 9].

The structure of the communicative-activity component of readiness for intercultural communication includes a communicative component, which is revealed by linguistic and sociocultural skills, as well as a group of professional skills that the university undergraduate must possess:

- 1) Communication skills: use of verbal and non-verbal communication techniques; compliance with the norms of business communication; the ability to create a positive atmosphere of communication and work (empathy);
- 2) Linguistic skills: discursive (ability to formulate statements, correctly convey the content of own statement to the interlocutor); communication in a foreign language in oral and written forms; creating a dialogue in a foreign language based on acquired linguistic knowledge;
- 3) Sociocultural skills: analysis of interlocutors' cultural differences; tolerant attitude towards the cultural characteristics of the communication partner; the use of sociocultural knowledge in communication; the ability to take into account the influence of stereotypes and national and cultural features of the country in the development of tourist routes and the implementation of intercultural communication; the ability to restrain own emotions, to show benevolence, tact;
- 4) Professional skills: organizational skills; ability to use management strategies; prediction and resolution of conflict situations; the use of technology for the development and organization of international tourist routes (see Figure 10) [11; 23; 29].



Figure 10. Skills of cross-cultural-behavioral component

4 Discussion

Thus, based on the analysis of the developed literature of foreign and domestic researchers regarding the essence of intercultural competence, as well as the core three components of the university undergraduates' professional training, we conclude that to achieve effective intercultural communication, knowledge and skills are necessary components, but not exhaustive ones [24]. Knowledge and skills in the context of intercultural interaction should be combined with openness, flexibility of thinking, as well as with a motivated desire to carry out effective communication and successfully build relationships [27].

R. Mason (2006) cites the opinion of The German researcher A. Knapp-Pothoff, who considers intercultural competence as a complex of analytical and strategic abilities that expand the interpretive spectrum of an individual in the process of interpersonal interaction with representatives of another culture [19].

We share the opinion of Seeberg and Minick (2012) regarding the demarcation in Western anthropology, the consideration of intercultural competence that takes place in two aspects: as the ability to form someone else's cultural identity, which involves knowledge of the language, values, norms, and standards of behavior of another communicative community [32]. Other researchers understand intercultural competence as a set of sociocultural and linguistic knowledge, communication skills, with the help of which any subject of culture can successfully communicate with speakers of other cultures at all levels of intercultural interaction [16; 18].

Investigating the psychological features of intercultural competence, N. Antonyuk interprets it as a leading integrative component of professional activity, which manifests itself in intercultural sensitivity, communicative technology, the ability to self-control and self-regulation [1]. In turn, O. Bezkorovajna believes that intercultural communication involves a set of background knowledge and the ability to adequately apply it in the conditions of a certain cultural context based on the comparison of two or more cultures [3]. Also, D. Matsumoto in the book "Psychology and Culture" reveals the factors that characterize intercultural competence, most of which relate to the individual's personal characteristics [3; 11].

Considering the structure of intercultural competence, V. Hudykunst proposed a model of intercultural competence, which consists of three basic components: motivational factors, knowledge factors, and skill factors [12; 17]. The first component involves the needs of the participants in the interaction and their mutual attraction, social ties, self-concept and openness to new information. The second component, that is knowledge factors, consist of expectations, shared information networks, awareness of more than one point of view, knowledge of alternative interpretations, and knowledge of similarities and differences. The third component includes the ability to empathize, be tolerant of ambiguity, adapt communication, create new categories, modify behavior, and gather relevant information (see Figure 11).

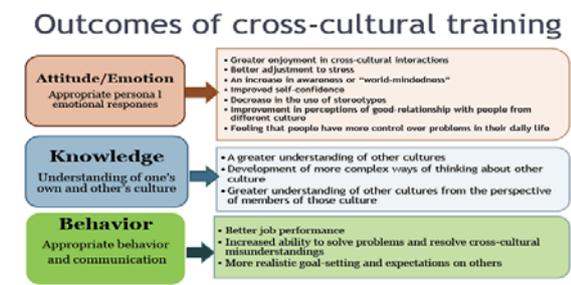


Figure 11. Professional outcomes of University undergraduates regarding intercultural competence

5 Conclusion

The result of professional training of modern university undergraduates is their readiness to interact with representatives of other systems of cultural orientation and is based on respect for other cultural values, implies the ability to recognize, respect and effectively use differences in perception, thinking, and behavior of own and another culture in intercultural contacts. Moreover, it provides for the observance of principles, values, norms, and rules related to the conditions determining for a certain situation in order to achieve the intended goal. It is an independently implemented ability determined by acquired knowledge and life experience, values and abilities developed as a result of cognitive activity and educational practice (see Fig. 12).

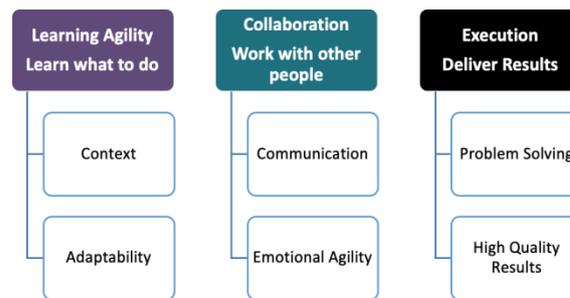


Figure 12. General Overview of Professional Training Results

In overall, generalizing the ongoing research, the three discussed components of professional training of university undergraduates were identified: motivational-valuable, cognitive-knowing, and cross-cultural-behavioral. However, all three of them cannot limit the professional development of the university undergraduates' multi-competency. As a result, the professional advancement of the university undergraduates is always in ongoing stage that should be constantly changed and improved along with external global modifications.

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Primary Paper Section: A**Secondary Paper Section: AM**

THE PHENOMENON OF UNIONIQUE MUSIC AS THE RESULT OF GLOBALIZATION PROCESSES OF THE 20TH - 21ST CENTURIES

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Abstract: The article is devoted to a systematic review of *Unionique music* as the music culture phenomenon and the justification of the introduction of "Unionique music" to the musicological circulation. The classification of musical domains is provided and their specifics are outlined, a brief history of their emergence and evolution is outlined. The genesis of the phenomenon of *Unionique music* — a musical domain in which there is an organic interpenetration of linguistic elements of academic and non-academic music — has been determined. Such interaction can occur at all levels of organization of a musical text — intonation, harmonic, metrorhythmic, timbre, compositional, dramatic, sociocultural. The need to involve the definition of Unionique music in the scientific field of music is explained. Since many difficulties, inconsistencies between musicologists and contradictions arise due to the multiplicity and interchangeability of genre definitions of music, which has a "hybrid nature", the proposed classification of domains and the separation of the new domain of Unionique music will help in the scientific field to take a step towards solving the above problems. The process of formation of the Unionique music domain works is described, which is called transduction and consists of two stages. The study proposed a method of determining the main "idiom", the base of Unionique music works, using the theory of memes and phenotypes. Six main combinations of music from different fields (ethnic, folklore, jazz, rock, pop, academic music) during the formation of Unionique music are indicated and a number of the most vivid examples are given. In the conclusions, a list of certain characteristics of Unionique music was created based on the presence and absence of specific rules or components.

Keywords: Unionique music; interaction of academic and non-academic music; meme; domain; transduction; globalization.

1 Introduction

The beginning of the 21st century is characterized by an increased tendency to interpenetration and mixing of various semiotic spheres. Interdisciplinarity is a word that can most briefly and aptly describe the processes taking place in the modern cultural and scientific space. The paradigm shift in the scientific world consists in changing methodological approaches to scientific research. The term "new method" refers to the inclusion of materials from other disciplines in a practical toolkit during research in a certain scientific field. Going beyond the boundaries of a specific scientific field and considering it from interdisciplinary angle, in the context of correlation and interaction with other fields is a new paradigm. As M. Mamardashvili rightly noted: "coupling that becomes the norm is a paradigm" [12].

These processes originated much earlier, they represent a certain result of globalization, speed, and easy access to intercontinental communication. While M. McLuhan drew attention to this fact [13], the speed of information exchange between people of different cultures (in time and space, as literature, from which one can learn about the experience and diverse achievements of previous generations became available to a larger number of people) and between scientific disciplines was already gaining momentum. Interdisciplinary connections are inherent, for example, in such a relatively new field as cybernetics. It combines information and feedback models, models of the nervous system, and information theory. This trend gives rise to the potential for new combinations that will include a variety of contemporary studies of integrity and organization. Thus, we ourselves are now witnessing the construction of a new synthetic concept that combines, for example, thermodynamics of irreversible processes and information theory. Such new scientific fields as information philosophy (founder L. Floridi), new theories in biology (R. Dawkins, D. Dennett, S. Blackmore - biology combined with information), psychoacoustics (McAdams, S., Giordano, Howard, D., Angus, J., Stainsby T., Cross I.), neuropsycholinguistics (Jean-Luc Nespoulous, Noam Chomsky) arise. In relation to music, a similar situation developed in the last third of the 20th and early 21st centuries. The tendency to combine different principles of musical text organization has existed for a long time. It can be traced even in the works of Renaissance and early Baroque composers. But over the past 100 years, this trend has grown exponentially. An

unprecedented number of works based on a combination of expressive means not only of music of different ethnicities (space), but also music of other times (time), with fundamentally different rules for constructing a musical text and principles of music making are recorded in modern musical culture. Among musicologists, the field of scientific interests includes the study of music with a combination of academic and non-academic approaches to the organization of a musical text, Alan Moore, Gunther Schuller, Richard Middleton, David Brackett, Gerhard Steingress, and others should be mentioned in this context. Despite this, the problem of selecting musical compositions for a particular genre has not been finally resolved.

The purpose of this article is to provide a systematic overview of the phenomenon of the Unionique music culture and justify the introduction of the relevant term "Unionique music" into the musicological circulation.

The object of the article is the musical art of the last third of the 20th - the beginning of the 21st century in the perspective of the new paradigm of globalization. The subject of the article is music that contains elements of fundamentally different types of thinking: academic (Western European academic tradition) and non-academic (jazz, ethnic, folklore, rock, pop, electronic music, etc.), to which we give a new definition - Unionique music.

2 Materials and Methods

The article uses the following methods: system method, theoretical generalization method, taxonomic method, genre-style method, analytical method.

The purpose and objectives of the work determined the use of a comprehensive methodology, a combination of musical-historical and analytical research methods. The need to present a panoramic picture of contemporary concert and performing arts has actualized the method of cultural and historical analysis. To understand the dynamics of the semantic and compositional-dramatic development of considered music works, comparative, structural-functional methods were used.

3 Results and Discussion

In this study, we relied on the fundamental methodological concept of general systems theory developed by Ludwig von Bertalanffy [2]. It describes the regularities of the structure, behavior, functioning, and development of systems. The basic idea is to find correspondences that allow understanding the laws of one system through the knowledge of another, regardless of whether they belong to the same species. Bertalanffy divided systems into closed and open ones. A mechanistic approach was applied to closed systems, while a dynamic approach - to open systems. Thus, the difference between living and nonliving is the way the components are organized, not the components themselves. So, according to this concept, we defined the main types of music with a fundamentally different organization of expressive means. These types of music require a different mindset when performing or listening. By analogy with the classification in biology, we call such types "domains". In biology, a domain is considered the highest taxonomic rank (a synonym of the word "domain" is an area, a field) [8]. Richard Middleton resorted to a similar classification, he called different types of music "layers" [14]. But this definition does not agree with our concept, since the concept of "layer" implies localized static and is the antipode of "musical diffusion", which is the main object of this study.

In music, we distinguish five domains. The first one is represented by ethnic music and folklore; the second is music of the Western European academic tradition; the third is jazz; the fourth is music performed on electric and electronic instruments, "Plugged" (requires electrical power to function); and the fifth domain is all the music that combines all the previous domains.

We call this domain *Unionique music*¹ (the name is formed from the two words “Union” and “Unique”, thus the specificity of this type of music can be most accurately conveyed). The emergence of musical domains happened gradually, at different stages of the ontogenetic process. So, one can talk about musical evolution. In the music of the third domain and, especially, the fourth domain, when many different principles of musical thinking and perception interact, the problem of determining the genre nature of compositions arises. The problem of genre diversity has not been solved for 50 years, although many authors who have devoted their research to non-academic music indicate such an inconvenient position regarding genre and style definitions. Genre definitions such as Third Stream, Chamber Jazz, Cross-over, World music, Fusion, Classical Rock, Baroque-Rock, Progressive Rock, Free-Jazz, Jazz-Avant-garde, Sympho-Jazz, Sympho-Rock and many others, are at the intersection of various musical domains. But none of them has a complete, concrete description; there are many contradictions, tautologies, and interchangeability in these genre definitions. For example, a very wide range of compositions that contain expressive means of classical music, jazz and/or ethnicity and folklore can be attributed to the Progressive Rock category. All this happens because the musicological toolkit for analyzing Unionique music is under development and not perfect. At the same time, the use of well-known established methods no longer meets the requirements arising from modern cultural processes. For example, when studying ethnic music, the problem of ethnocentrism may arise. World music researcher Philip Bohlman drew attention to this problem. The author notes that when studying music with an ethnic (“non-Western”) component, many inconveniences arise, if we consider that all musical terminology and concepts created thanks to these terms are of Western origin [4]. Bohlman warns that the desire to understand music that is on the border of fundamentally different spheres of music making (for example, different cultures - Western and Eastern) as discovering the path to universality is so strong that it can lead to the opposite effect - the leveling of differences. Bohlman also questions whether the Western terminological apparatus makes errors regarding the meaning of genuine ethnic musical material.

Marcello Keller believes that a more correct term for the above phenomenon would be “World pop music”. This is music with the interrelationship of different musical spheres, which the author thinks in a holistic system of coordinates “East-West-North-South”, and believes that it is mainly non-European jazz or pop [11]. A significant influence on it comes from Africa, the source of the main elements of blues, jazz, and pop music. American culture was crucial in initiating the large-scale musical hybridization that led to what is now known as world music (the Afro-American tradition coexists with the Latin American tradition), but Europe plays a significant role. While major American cities are becoming more multicultural, European cities are catching up at a significant rate as European countries begin to receive waves of immigration from Africa and Eastern Europe. Paris, Frankfurt, Amsterdam, and Rome already offer most of World music’s musical productions. Cities such as Frankfurt and Paris became centers for the production of non-Western music intended for distribution not only among immigrants but also in the country of origin. In such fertile multicultural territories, the number of mixed bands consisting of European and non-European musicians is growing. They create an audience that is fascinated by East-West-North-South fusion music [11, p. 210].

The problem of difficulties in the identification and genre definition of works of a “hybrid” nature is raised by a number of researchers. The collection of articles “*Songs of the Minotaur – Hybridity and Popular Music in the Era of Globalization*” focuses on transcultural hybridization in popular music. Involvement of Spanish flamenco, Argentine tango, Algerian

(Rai), Catalan sardana, Greek Rebetika and English urban folk in popular music is considered. It is interesting that the authors do not consider such music World music, but invented a separate name for this type of music - “transcultural hybridization”. The authors emphasize the unique nature of this phenomenon and aim to expand the narrow boundaries of academic musical disciplines. The process of hybridization is directly related to the recoding of semantics, meanings, de-territorialization and globalization. All the above-mentioned styles have common features: all these styles arose in the second half of the 19th century, a transcultural space is created. Styles are considered in a social and cultural sense. Social transgression led to the popularization of the music of the lower social layer, the lower class among the middle class. Cultural transgression leads to the phenomenon of World music and a globalizing view of ethnic music. Andreas Gebesmair, for example, understands hybridization as the re-territorialization of the de-territorialized global world of pop music. “Mainstream pop is blended or flavored with references to local traditions, either as a consequence of the integration of local styles or simply through its de-Anglicization. Therefore Manu Chao’s “Latin reggae” is a hybrid - the result of hybridization on a high level: he mixes styles which have themselves been regarded as hybrids in 20 century popular music history” [9, p. 17].

When analyzing the music of the fifth domain of *Unionique music*, we highlight such important categories as process and result. We call the process when elements of different musical languages are combined *transduction*². We chose the literal meaning of *transduction* - shift. Namely in this sense this term exists in biology (Transduction, 2021). In addition, the “-trans” prefix indicates that the process we want to capture occurs outside of a single system. That is, it is about intercategory interaction. The concept of “transcultural hybridization”, which was discussed above, also has the prefix - *trans-*, that is, the authors also feel this departure from the established system, and the word “hybridization” indicates the combination of unusual, fundamentally different organizations of musical thinking, spheres of music making. It is important to note that such a term “transduction” does not contain an indication of the method of fixing the musical material subject to movement and assimilation. Defining and choosing terminology always has its history of formation. After all, the researcher needs to take into account all possible problems and “logical traps” that may arise when checking the term for “workability” and compliance with a wide range of criteria. During the process of choosing the term “transduction”, there were certain difficulties associated with the wrong approach regarding considering the musical language as equivalent to linguistic languages and giving this term the meaning in which it appears precisely in linguistics. Since music is a communication system with loose denotation, that is, it does not have clear lexical definitions, as it happens in verbal languages, analogies between music and linguistics cannot “work” correctly.

When it comes to processes occurring within individual domains, there are no problems with terminology or definitions. In the academic music of the second domain, there is an established terminological apparatus capable of describing any “internal” phenomenon, a product of composer’s creativity or performance interpretation. Within the first and third domains, there is also a “toolbox” for determining creative processes and the results of their activities. But in such cases, when the domains are mixed, it turned out that the existing terminological apparatus “does not work”. The fact that Gunther Schuller, the inventor of the term “Third Stream” [18], does not give a clear definition of the nature of this music is a clear proof of the imperfection of the existing system of terminological definitions. Using an academic, established toolkit, Schuller failed to formulate specifically what Third Stream music is. This also applies to other “border” musical trends: World music, Chamber jazz, Fusion, Progressive rock, Sympho-rock, and many others. So, let us formulate a definition. *Transduction in music is the*

¹ More details about the history of the fifth domain Unionique music can be found in the work Paliy, I. (2019). *Unionique Music as a New Phenomenon of the Musical Culture: Answering the Main Questions. Problems of the interaction of art, pedagogy and the theory and practice of education*, 55, 22-32.

² The phenomenon of transduction in musical culture is described in more detail in the PhD thesis of I. Paliy (Paliy, 2012)

transfer of elements of the musical language from one domain to another, which can occur at different levels of music making: intonation, composition, and timbre, as a result of which musical material of a fundamentally new quality is formed. Such material has no analogues among previous works and cannot be classified according to certain genre or style features. The creativity of many musicians, such as Frank Zappa or the band Yes, is so unique and original that it creates an individual style and becomes self-contained. Musical material of this kind forms a personal, separate system in which its own rules apply and there is a personal set of elements of the musical language, that is organized according to its own unique principles. That is, any attempt to play in this style will be perceived as copying, exact imitation of the music of these composers-performers.

There are two stages of formation of Unionique music. The first stage consists in the formation of a “nucleus” (the definition of “nucleus” is related to the concept of “meme”, the theory of which was introduced by Richard Dawkins and continued in the studies of Daniel Dennett and Susan Blackmore). According to Dawkins, a meme is the basic unit of cultural information, analogous to a gene [6]. Dennett shares a similar opinion and considers words to be the best example of memes [7]. A meme is spread through tools, behavior, and signification - the physical manifestations of a meme. Dawkins considers the desire to reproduce (replication) and imitate (imitation) an important component for the functioning of a meme. It is worth saying a few words about the concept of “replicators”. When studying the functioning of memes in culture, William Benzon criticizes the use of this concept in relation to culture. Both Dawkins, who introduced this term, and Dennett use it as a core term: memes are replicators. But the concept of replication, Benzon argues, does not refer to the underlying mechanisms of cultural interactions. Benzon also notes that the concept of replication has proven problematic both within biology and within culture [1]. Memes can act as influences and as “building blocks” for new memes. As Susan Blackmore points out, the size of memes does not matter: a meme can be quite small (in the case of music, just a few notes) or very large (an entire piece of music, such as an opera or symphony) [3].

So, for our theory, we will form the following definition: a nucleus is a set of memes formed from other memes that are part of it (influences), which has sufficient potential (power) to allow its bearer to produce new informational units on this basis, which, in turn, can themselves become a meme for other people. So, the “nucleus” is both a simple and a structurally complex unit. An important concept for the proposed theory of formation of Unionique music is phenotype. Phenotype is the external manifestation of a gene in a finished organism. Dawkins continues this concept and introduces into scientific circulation the concept of an extended phenotype - such a manifestation of a gene that allows its carrier to transform objects in the surrounding world, thus this transformation of objects makes them an integral part of the existence of gene carriers [6]. It is about both the skills that individuals have from birth (weaving a web, making nests, building dams), and about the abilities that an individual learns during his life (for example, walking). This leads to a conclusion regarding the informative nature of the extended phenotype. It is a meme (information template, “matrix”) that is built into the body's memory from the very beginning, without the need to learn, with the help of genes. Thus, the first stage of the emergence of Unionique music is the formation of a “nucleus” from smaller units - phenotypes from other memes. Many constituent parts form a whole. The second stage is when the “nucleus” itself becomes part of another structure (system) and generates phenotypes. The “nucleus” becomes one of the constituent elements for the formation of the next “nucleus”. Thus, depending on the frame of reference, the “nucleus” can manifest itself as a whole and as a separate part of it. Therefore, when determining the composition of Unionique music, the criterion of primacy must be taken into account.

An important insight into the proposed theory of phenotypes is contained in a study by Gail Holst-Warhaft. The author believes that Mozart's Turkish rondo does not make the work hybrid,

does not create musical material of new quality, a new genre-stylistic transformation, just as the jazz harmony used by Debussy does not stand in the way of the perception of an academic musical work. These are examples where the interaction of musical elements is weak enough, to a small degree to be considered hybrid. The interpenetration of musical elements must be more substantial to make a new quality. In such cases, conservatism wins. The final product remains in a conservative form. That is, a small decoration with exotic expressive means takes place, but the concept does not change, the general matrix of the work does not change [10]. In addition, Holst-Warhaft proposes a similar scheme regarding nucleus and phenotypes - a case where phenotypes and influences themselves become the nucleus [10, p. 24]. However, it is a pity that the author does not develop this concept further.

For a clearer understanding of the nature of Unionique music, the following logical formula can be proposed: *the process of transduction does not necessarily lead to the appearance of Unionique music, but all samples of Unionique music always arise as a result of transduction. So, not any transduction can form Unionique music patterns, but Unionique music can only arise as a result of transduction.*

The result of the transduction process is a fundamentally new quality of musical material. This material is so specific and diverse that it cannot be classified only by genre and style. But it needs a separate name, because there have been a lot of examples of such music compositions over the past 50-60 years. Such compositions are combined into a new, separate, fifth domain. In addition, it is worth noting that there are 6 common combinations of pair-interactions of different domains that contribute to the formation of Unionique music compositions. A separate group consists of *Unionique music* compositions, which were formed by the interaction of more than two domains. Let us list the main combinations — types of Unionique music:

1. Ethnic music + “classics” (music of the Western European academic tradition)
2. Ethnic music + jazz
3. Ethnic music + rock and electronic music
4. “Classics” + jazz
5. “Classics” + rock and electronic music
6. Jazz + rock
7. Other combinations containing more than 2 domains. Next, we will give several examples of performers who work in the fifth domain.

Among performers representing the variety of Unionique music, in which the interaction of ethnic music and Western European academic music takes place, one should mention: Kronos Quartet, Ravi Shankar (Concertos for sitar and orchestra No. 1 and 2, a project with Yehudi Menuhin), Anat Cohen, Eddie Daniels, Lajos Dudas.

Performers representing the variety of Unionique music, in which the interaction of Western European academic music and rock music takes place, are the following: Procol Harum, Emerson, Lake and Palmer, Deep Purple, Led Zeppelin, Jeff Beck, Cream (White Room), Blood, Sweat and Tears, Frank Zappa, Queen (Bohemian Rhapsody), Jefferson Airplane, King Crimson, Jethro Tull, Pink Floyd, Ten Years After, Yes, Rick Wakeman (Lisztomania), Eric Burdon, Doors, Ray Manzarek, Grateful Dead (Terrapin Station).

Among performers representing the variety of Unionique music, in which the interaction of ethnic music and rock music takes place, there are Led Zeppelin (Kashmir), Robert Plant (albums Mighty Rearranger, Band of Joy, Lullaby and the Ceaseless Roar), Bob Dylan (One More Cup Of Coffee), Rolling Stones (Paint It Black, Continental Drift), Ginger Baker Airforce, Beatles (Love you to, Harrison, Ravi Shankar).

George Gershwin, Leonard Bernstein, Miles Davis (Selim), Modern Jazz Quartet, Chick Corea, Dave Brubeck, Ornette Coleman (Skies Of America), Milton Babbitt (*All Set* for jazz ensemble), Harold Shapero (On Green Mountain), Gunther

Schuller, Eric Dolphy, Charles Mingus, John Lewis, Ralf Towner, Joshua Redman, Carla Bley, Herbie Mann are performers-representatives of the variety of Unionique music, in which the interaction of Western European academic music with jazz takes place.

Performers-representatives of the variety of Unionique music, in which the interaction of ethnic music with jazz takes place are Dizzy Gillespie, Miles Davis, Joshua Redman, Herbie Mann, Joe Zawinul.

Among performers-representatives of the variety of Unionique music, in which the interaction of jazz and rock music takes place, we can mention Soft Machine, Joe Zawinul, Jaco Pastorius, Weather Report, Steely Dan.

Performers representing the variety of Unionique music, in which the interaction of more than two musical domains takes place, are: Oregon (jazz, ethnic, classics), Joe Harriot (Indo-Jazz-Suite), Anoushka Shankar (Land Of Gold – ethnic, jazz, electronic music), John Zorn and Masada Chamber Ensembles (Bar Kokhba), Joe Zawinul (Stories of the Danube), Jethro Tull (Minstrel in the Gallery - rock, folklore and Western European academic tradition), Frank Zappa (Inca Road - rock, classical, ethnic, jazz), Grateful Dead (The Other One).

4 Conclusion

In order to more systematically clarify what type of music should be attributed to the fifth domain of Unionique music, we have created a list of certain characteristics of it according to the principle of the presence and absence of specific rules or components.

Unionique music contains the following:

1. Interpenetration of elements of ethnicity, folk music, jazz, rock music, classics, pop music.
2. This includes compositions containing such interpenetration. Such compositions are rare, they can be present in the work of different composers as separate instances, but not be a determining factor in defining the general nature of their work. The compositions of Unionique music act as the "Red Book of Music".
3. Combining Unionique examples into a separate category is possible, but this is conditional.

What Unionique music is not:

1. Unionique music cannot be defined as a separate genre of music.
2. Unionique music cannot be defined as a separate style of music.
3. This is not processing, arranging, translating previously existing musical material into another field (classical-rock, classical-jazz, for example). The material must be new.
4. These are not the cases when classical musicians play rock, ethnic, or jazz and vice versa.
5. This is not the inclusion of quotes from other compositions in the work, even when these compositions belong to different spheres of music making. But the question is controversial.
6. The use of timbres of specific ethnic instruments or electric instruments is not enough to be considered Unionique music.
7. It should be noted that an important factor in the formation of Unionique music is an experimental approach to creating material. But the presence of this factor does not necessarily indicate a work from the fifth domain. However, the works of Unionique music always contain innovative experimental searches of composers. Therefore, a specific musicological toolkit, which could be used to identify and fix certain processes in works with a combination of different principles of organization of the musical text, which takes place in modern musical culture, is still in the process of its formation. But we hope that replenishing the terminological apparatus of musicology

with concepts such as "transduction" and "Unionique music" can become an important step on the way to studying music in large-scale globalization manifestations.

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SINGING AND TRUMPET AS CONCERT OPPOSITIONS OF THE BAROQUE AGE

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Abstract: The article compares in detail the related spheres of solo performance, which reached the highest degree of virtuosity in the Baroque era - the *bel canto* vocal style and the clarino style, which involved playing in the treble register of a natural baroque trumpet. An analysis of the specific features of each of the performance spheres was carried out. Examining the methodology of the old Italian school made it possible to reveal the characteristic features of the *bel canto* style, which was formed in the performing practice of castrato singers of the Baroque era: the specifics of sound delivery, timbre features, ornamentation. Accordingly, the historical timbral semantics of the natural trumpet, its main varieties, evolutionary changes that led to its status increase to an orchestral one, and later to a solo virtuoso instrument are considered. These spheres are considered as concerted oppositions that often function in a compatible ensemble. The purpose of the study was to identify common features in the vocal style of *bel canto* and solo playing on the natural concert trumpet solo. As a basic method of research, a comparative approach was used according to the following criteria: non-temperedness, features of sound production, timbre semantics, features of the functioning of the trumpet in a baroque orchestra. A comparison of the performance capabilities and specifics of solo singing and the clarino trumpet showed that these areas are phenomena of a similar nature, namely: they are untempered "instruments"; they have similarities in sound production techniques; they are timbrally related, not only by high tessitura, but also by timbral semantics; in a similar way, they use musical and rhetorical figures to embody affects. The commonalities found characterize the compared phenomena as real products of the Baroque era, which combine polar characteristics: naturalness and mechanicalness, instrumental and vocal principles.

Keywords: baroque; *bel canto*; clarino; concert; concertino; the Old Italian School of Singing.

1 Introduction

Numerous cultural studies of the Baroque era successfully confirm the accuracy of the name of this historical period: "the translation of the word baroque (barocco) from Italian as "strange", "chimeric" is well known. Let us recall its less common, but chronologically older etymological source – "wrong", which best reveals the essence of the phenomenon. This is what pearls, whose shape was strikingly different from the classic spherical and had the appearance of an ellipse, oval, tablet, pear, drop, etc., were called from a long time ago (such pearls are still called baroque pearls) [3, p. 203]. The Baroque era has quite a few "irregularities" and contradictions, successfully combining what would seem to be difficult or impossible to combine. The individual and natural exist in an organic symbiosis with the artificial, unnatural and mechanistic, which is reflected in the musical art of the time in a unique way.

The central musical event of this era – the creation of an opera, a spontaneous consequence of attempts to reconstruct an ancient Greek tragedy – is connected with the desire to convey the peculiarities of living human speech through musical means. These persistent attempts led to an unprecedented flourishing of solo singing, which had a corresponding effect on the field of instrumental performance: the process of separating independent parts for solo instruments began in the Baroque orchestra. The rapidly growing priority of the individual element was articulated by the principle of concert performance born in the Baroque era – the opposition of individual instruments or their groups to the sound of an entire orchestra. Today, the fact that similar solos were entrusted not only to the queen of the orchestra, the violin, seems to be a strong proof of the scale of this general trend. In the Baroque era, instruments whose solo, and even more so, virtuoso potential in professional music art had not been anticipated at all before began to perform in this new quality.

This article will focus on the comparison of two related musical elements, whose virtuoso concert possibilities opened up and reached their highest point precisely in the Baroque period: the human voice and the solo trumpet. The purpose of the research is

to identify common features in the vocal style of *bel canto* and solo playing on the natural concert trumpet.

2 Materials and Methods

Identifying the common features of the studied phenomena - solo baroque *bel canto* singing and virtuoso clarino performance style - required a separate consideration of their features in the context of the processes in musical art characteristic of the baroque era. The rich experience of modern researchers and stage implementers of the historical manner of singing became a useful methodological toolkit for us - the fundamental work of the Dutch opera singer Daniela Bloem-Hubatka "The Old Italian School of Singing. A Theoretical and Practical Guide" [2]; the experience of the soloist of the Warsaw Royal Opera Olga Pasichnyk ([1], [5], [7], [10], [12], [15]), as well as the British singer, interpreter of baroque singing Emma Kirkby [11]. The used sources made it possible to identify the characteristic features of the *bel canto* style, which was formed in the performing practice of castrato singers of the Baroque era in terms of the specifics of sound delivery, timbre features, and ornamentation.

A similar study was conducted in relation to the solo baroque trumpet - its historical timbral semantics, evolutionary transformations that led to the status of a solo virtuoso instrument. The materials of the research were the works of S. Cichor [4], N. Harnoncourt [8], the doctoral dissertation of Tomasz Ślusarczyk "Rozwój i znaczenie sztuki clarino na przełomie XVII i XVIII wieku w aspekcie historycznej praktyki wykonawczej na podasz wybranych arii z koncertującą trąbką" [16].

In the process of comparison of the researched areas of solo performance, the following comparison criteria were taken into account: untemperedness, peculiarities of sound production, timbral semantics, peculiarities of trumpet functioning in a baroque orchestra.

3 Results and Discussion

A comparison of performance capabilities and specifics of solo singing and the clarino trumpet showed that these areas are phenomena of a similar nature, namely:

- They are untempered;
- They have similarities in sound production techniques;
- They are timbrally related, not only by high tessitura, but also by timbral semantics;
- Musical and rhetorical figures are used in a similar way to embody affects.

The commonalities found characterize the compared phenomena as real products of the Baroque era, which combine polar characteristics: naturalness and mechanicalness, instrumental and vocal principles.

Namely the specifics of the era that allow calling both of these performing units as *instruments*. The organic and typically baroque fusion of opposite principles – the highest degree of naturalness and the highest artificiality, putting the vividly individual on a pedestal and the functioning of mechanicalness as a basic interpretive method – can be traced in both researched spheres. Highlighting this aspect - one of many, in relation to such a complex and meaningful phenomenon as the Baroque - allows looking at the various facets of this mysterious era from a different angle.

The Baroque period gave the world a special way of singing. The basic principles of this art remain classic in solo vocal performance to this day. Since so far a lot has been written about opera and church singing and its flourishing in the Baroque era, let us touch in more detail on the factors that contributed to the formation of the voice as a concert instrument.

Italy, which played a decisive role in this case, also generated the corresponding commonly used term - *bel canto*. In parallel, alternative terms coexist. For example, the Dutch opera singer Daniela Bloem-Hubatka (lyric soprano), the author of a fundamental work on the method of setting the voice [2], emphasizes the terms “the old Italian school of singing” or “historical singing”, having significant reasons for this. The rich performing experience and the huge analytical work carried out allowed her to come to the conclusion that the 20th century (which is often compared and contrasted with the Baroque era in modern musicological studies) brought a tangible pluralistic disorder to the vocal performance discourse. As a result, today there are different, sometimes conflicting interpretations of both the term *bel canto* and ideas about which method of setting the voice exactly should be considered optimal and correct.

Namely in the Baroque era, in the 17th century, the foundations of the school of solo singing were laid, and the roots of this brilliant performance tradition, which is based on the most natural methods of using the anatomical features of the human body, have a paradoxically unnatural genesis: it is indicative and symbolic that the basic environment in which its actual foundations shaped, was the art of castrati singing.

The reward of the dangerous at the time, but church-sanctioned surgical operation was an unusual voice. In the churches of the 17th and 18th centuries, the singing of castrati often compensated for the lack of female voices, since women were forbidden to sing during liturgies. “By 1780, there were more than 200 castrato singers in Rome alone” [1]. Many of these masterful performers left behind works summarizing their performance experience. Among them, there are the memoirs and autobiography of Filippo Balatri (1682–1756)¹ methodical guidelines of Girolamo Crescentini (1762–1846)², etc.

Testimonies of contemporaries, as well as numerous existing examples of this amazing performing practice, which, thanks to modern technologies, we have the opportunity to hear today³, allow forming an idea about the characteristic features of castrato singing. Its most noticeable feature is an unusual – “non-human”, “superhuman” timbre. Sharpness, even shrillness and at the same time - flexibility, lightness, power and breadth of the range of this voice gave reason to contemporaries to call it the “cry of an angel”. A distant idea of the impression that this singing had on the listeners, especially on the female audience, who literally fell in love with both the voices and their carriers, can give the impression of an unnaturally high sounding voice artificially passed through a synthesizer (a similar effect was achieved by Oleksiy Rybnikov in the rock opera “Juno and Avos” created by him in 1980; the composer aimed to convey the unearthly, superhuman voice of the Mother of God). Daniela Bloem-Hubatka quotes the memories of Charles François Gounod, who in 1839 visited the Sistine Chapel and heard the castratos singing: “The severe, ascetic music, level and calm like an ocean horizon, serene even to monotony, anti-sensuous, and yet so intense on its fervor of religious contemplation as sometimes to rise to ecstasy, had a strange, almost a disagreeable effect on me at first. Whether it was the actual style of composition, then quite new to me – the distinctive sonority of those peculiar voices, now heard for the first time – or the firm, almost harsh attack, the strong accentuation which gives such a startling effect to the general execution of the score, by the way it marks the opening of each vocal part in the closely woven web of sound – I know not” [2, p. 30-31]⁴. It is significant that the described performance initially made an unpleasant impression on the composer, but this did not prevent him from coming and listening to this song again and again. The fact that Daniela herself emphasizes the same effect that the singing of Alessandro

Moreschi, the last of the castrati, who was called “the angel of Rome”⁵ had on her, is also significant.

The singing principles crystallized in the performing practice of castrati spread from Italy to other countries of Western Europe and became almost universally used during the Baroque era (with the exception of France, where the Italian manner was categorically not accepted). This technique was used in the famous old Italian “conservatories” - asylums for orphans, where the most talented of them could receive a brilliant musical education, learning singing and instrumental performance from such masters of music as A. Vivaldi, B. Marcello, N. Porpora.

Unlike the existing modern vocal techniques, which often harm not only the voice, but also the health of the singer in general, the correct vocal manner makes it possible to sing for a long time without fatigue and preserve the freshness and strength of the voice until old age.

The key postulates of this manner of singing are the following:

- A hard attack of the voice, *coup de glotte* (the place “sung with”, located below the vocal cords, in the depth of the throat, where the arytenoid cartilages are located; actually they, closing, ensure the vibration of the vocal cords; the vocal cords themselves, like the larynx, do not strain at all); just such a firm attack by Moreschi often starts the tone with a grace note, common practice in the Old Italian School;
- The role of the chest resonator, on the basis of which even the upper notes are performed (in combination with methods according to which the voice is “directed” to the bridge of the nose - the “mask”, to the top of the head, to the front teeth, etc.);
- Strong strengthening of the voice with breathing, accompanied by a certain tension of the abdominal muscles (*appoggiare la voce*); it is interesting that during the baroque period, correct breathing of singers was greatly facilitated by corsets;
- Singing with focused breathing: air should not escape uncontrollably during singing (when practicing singing, the performers held a mirror in front of them, the glass of which should not fog up, or a candle, the flame of which should not tremble from the flow of air);
- A straight posture, which contributes to the expansion of the chest, and therefore to a strong singing support (“breath prop”).

So, the performing manner used by the castrato singers of the Baroque era (and, therefore, a phenomenon whose main characteristic is the emphasized artificiality of its origin!), paradoxically defined the methodology of the school of solo singing a century later as being based on the principle of the most effective use of human body anatomical features. The most outstanding vocalists of different times grew up on the basis of this school (Shalyapin, Nezhdanova, Lemeshev, Sobinov, Kozlovsky, Patti, Batistini, Tagliavini, Björling, Tauber, Tucker, Gobbi, Mancini, Tosi, Nathan, Andreas Herbst, Pier Francesco, Agricola). Its active preachers were Manuel Garcia and his followers, whose activities date back to the 1930s: Henry Wood, Blanche Marchesi (her mother was a student of Garcia), Blanche Arral, and others.

Performance of baroque opera parts requires considerable endurance. “You can sing a part of *Traviata* or *Carmen*, but sing eleven arias of *Semele*, or nine arias of *Cleopatra*! Plus kilometers of recitatives, duets, trios, etc. Baroque repertoire often puts people off when they see how much material there is, because it is not two arias, but, for example, eleven, and they are all different. Or, let us say, there are parts where you have to possess a strong dramatic voice and at the same time a very light coloratura in order to be technically able to sing”, O. Pasichnyk [12] notes. The peculiarity of the manner of singing of the old Italian baroque school is that the method of sound production

¹ Frutti del Mondo, sperimentati da F.b., nativo dell'Alfea in Toscana 1735

² Raccolta di Esercizi per il Canto, Recueils d'Exercices, Paris, 1811

³ Audio recording of castrato singer Alessandro Moreschi (1858–1921) singing at the age of 40: <https://youtu.be/KLjvfnqD0ws>

⁴ Quoted from: Charles Gounod. Mémoires d'un Artiste, Paris, 1896, pp. 99–100. English Edition. Autobiographical Reminiscences, London, 1896, pp. 69–70.

⁵ D. Bloem-Hubatka indicates the following source of exclusive recordings of the singer: The Last Castrato, Complete Vatican Recordings, Pearl Opal CD 9823

offered by it is as natural as possible. It is based on a common way of talking or shouting - skills that a person has from birth, without thinking about how it is done.

Attention should also be paid to D. Bloem-Hubatka's accented misconception⁶ that only Italian singers can really reproduce such a vocally correct manner of singing, and representatives of more northern nationalities are completely unsuitable for this.

"Baroque is characterized by a prolonged stay within one emotional state, a deeper, all-consuming penetration into the finest subtleties of human feelings, which is accordingly accompanied by a richer palette of voice timbre tones", A. Guzhva and N. Mykolaichuk note [7, p. 155]. The correct manner of singing preserves the individuality of the voice, its unique timbre.

Describing the singing of Alessandro Moreschi in a trio with bass and tenor, D. Bloem-Hubatka uses a characteristic metaphor, noting that the voices seemed to "bite each other", that is, they did not merge into a homogeneous sound mass, but rather differentiated, according to the requirements of polyphonic works of Palestrina's and Cappocci, which they performed [2]. The concept of individuality and timbre uniqueness of baroque vocals is largely confirmed by the rich experience of the soloist of the Polish Royal Opera Olga Pasichnyk, which she generously shared at the master classes she held in Kyiv (2018–2019)⁷. In particular, the master points out the need of "painting" with the voice, as if with paint, during the performance of the work: according to the content of the music, it should be "watercolor, oil paint, or gouache" [7, p. 160].

Bloem-Hubatka notes that, often as a result of incorrect voice setting, the timbre of singing differs from the timbre in which a person usually speaks. Hence, there is a certain tonal uniformity characteristic of opera performers. Instead, the timbres of the voices of singers of the Baroque era were characterized by diversity, which was a direct consequence of the principle of reproduction of individuality, the uniqueness of human speech by musical means. This idea was born in the midst of the Florentine intellectual elite (philosophers, writers, musicians), centered around the Italian aristocrats - Count Giovanni Bardi and Marquis Jacopo Corsi, in whose houses the meetings of the circle (Italian - *camerata*) took place. The activities of the members of the *camerata* (Giulio Caccini, Vincenzo Galileo (the father of the famous scientist), Jacopo Peri, and others) focused on the search for optimal musical means, with the help of which it would be possible to reconstruct the ancient Greek monody. Such a reconstructed monody became a *secco* recitative, sung to the accompaniment of *basso continuo*. "Caccini's colleague Galilei explained in detail how the modern composer should proceed. He should listen to how people of various social classes speak with each other in all kinds of real situations, listen to how conversations or discussions are carried out between those of high and those of low station, and note how such discussions sound! These exercises will reveal to the composer precisely what he should set to music. (This is by the way, exactly the way in which the original performance style of Greek drama was conceived). Significantly enough, this new style was not developed by composers with classical training, but by dilettantes and singers" [8, p. 130].

A. Guzhva and N. Mykolaichuk present an eloquent example of a comparison of the performance of Cleopatra's aria from H. F. Handel's opera "Julius Caesar" by American opera singer Joyce Di Donato and French opera singer Patricia Petibó. The convincing and bright singing of both performers differs in shades of interpretation: while Di Donato's singing is based on the "affect" of anger and desire for revenge, Petibó's performance emphasizes helplessness and despair [7, p. 156]. In

this way, one can see the multifacetedness and conceptual variability of baroque arias.

The theory of affects should also be considered from a slightly different angle and those aspects that clearly characterize it as a product of the Baroque era should be emphasized in it. The essential feature of this theory is surprisingly accurately revealed by Quantz's statement quoted by N. Harmoncourt: "Music is nothing other than an artificial language" [8, p. 118]. Widely used rhetorical figures, embodied in the fabric of musical works as musical figures, performed the function of peculiar words and expressions. "These figures are more or less fixed sequences of tones which were used in the 17th Century in recitative and solo singing for certain words and expressive content. Separated from their text, these motifs were then used as purely instrumental figures, but were able to evoke the original meaning or feeling in the listener by association" [8, p. 120]. The last statement will be of significant importance in the further context of our research. In this context, the reverse process looks quite natural: "Bach then took this body of instrumental figures and transposed it back again into song. This interesting reversal may provide the reason that many singers find Bach difficult to sing, saying that he writes so "instrumentally"" [8, p. 133]. The mentioned peculiarity of the theory of affects as a conceptual basis of the art of the Baroque era allows seeing more clearly the dichotomy of naturalness and artificiality of the old Italian school of singing. The voice sounded like an instrument, and the instruments sounded like a voice. There was an active interpenetration of the vocal and instrumental spheres.

The performance potential of an opera singer-soloist (prima donna, tenor, castrato singer) was fully revealed in the *da capo* aria. Its three-part structure provided for a reprise with a cadenza, where the performer could demonstrate the maximum of his ability to virtuosic improvisation. Namely this section of the aria poses a particularly difficult task for the modern music-historical reconstructor. "Much of what an authentic musician can bring to his interpretive version is often not contained in the original notes, but is implied in the performance of the piece - ornamentation (vocal and instrumental), dynamic nuances, strokes, random signs of alteration and the like", - O. Zhukova notes [18, p. 21]. "The loss of the continuity of performance traditions starting from the Renaissance and Baroque, in the vocal art, calls for close attention to the problems of understanding and correct reproduction of ancient musical and artistic texts by modern vocalists", I. Kodenko rightly notes [9, p. 100]. According to the recommendations of O. Pasichnyk, decorations in the vocal part should match the words and not distort the content of the text; the cadence at the end of the *da capo* aria should not be a pure exercise in virtuosity [7, p. 159]. An experienced performer also points to the need for a singer to have good knowledge not only of own part, but also of the entire score of the piece, in accordance with the need for an organic ensemble of independent parts [7, p. 158]. We note that today the reconstructors of authentic baroque performance rightly strive to achieve certain optimal, if not ideal, performance solutions in the process of interpreting the works of this era. However, one must realize that in the times of the baroque opera "boom", when the singing of famous prima donnas and tenors was accompanied by ovations, similar to the audience's delight at the performances of current pop stars, conceptually flawless performances did not always take place.

The idea of reviving ancient tragedy through the transmission of natural human speech via musical means had somewhat different consequences than those envisaged by the creators of the Florentine *camerata*. The opera performance quickly became "overgrown" with conventions, which, however, did not cause objections in Baroque times: for example, it was quite natural for men to play female roles and, as a result, the fact was that female characters were often a head taller than their scene partners. Deeper contradictions and paradoxes also took place. What was initially conceived as living and natural, rather quickly took on the features of a certain mechanicalness. The art of singing, which skillfully reproduced various emotions, reached such a high level that it was not a mistake to compare it with a perfectly

⁶ Such a position is presented, in particular, in the work: Husler and Rodd-Marling, Singen, Mainz, 1965.

⁷ The opera artist became the curator of baroque opera productions in Ukraine by young enthusiastic domestic singers as part of the "Open Opera Ukraine" project. At first, opera "Dido and Aeneas" by Purcell (2018) was staged and performed, followed by "Acis and Galatea" by H. F. Handel (2019).

functioning musical instrument. The voice largely borrowed the techniques of the instrumental play: grace notes, mordents, trills, etc. At the same time, there was also a reverse influence: individual instruments begin to stand out from the orchestra, assigning them solo parts took place. In other words, the instrument begins to imitate the singing human voice. In fact, precisely thanks to the development of opera, its important components - arias *da capo*, ensembles, overtures, interludes, which are diverse in content and affect, - laid the foundation for the concept of concert performance in instrumental music, the central idea of which is opposition, the oppositional confrontation of *solo* or *concertino* and *tutti*. Voice and instrumental solos functioned as equal concert units in the Baroque period.

The English musicologist and composer Charles Burney (1726–1814) presents an eloquent illustration of the described phenomenon. The famous castrato singer Farinelli (1705–1782, real name – Carlo Broschi) in his youth performed during the 1721–1722 season at the Aliberti Theater, singing in operas by N. Porpora. According to C. Burney, "... during the performance of one opera, he competed every evening with a famous trumpet player in an aria, which he accompanied on this instrument; at first it seemed only a simple and friendly contest, until the spectators became interested in the dispute and divided into two parties; after many performances in which they both built up the same sound with all their might, showing the power of their lungs and trying to outdo each other in brilliance and power, they once filleted a sound with a trill in a tercio for such a long time that the audience began to look forward to the result, and both seemed extremely exhausted; and indeed the trumpeter, quite exhausted, stopped, supposing that his adversary was equally fatigued, and that the contest had ended in a draw; then Farinelli, smiling as a sign that he had hitherto only been joking with him, began in the same breath, with renewed vigor, not only to refine the sound in the trill, but also to perform the most difficult and rapid ornaments, until at last he was compelled to stop by the audience's ovation" [6]⁸. The given memories describe a completely natural phenomenon for the Baroque: the competition of concert oppositions, related in their ambivalence. The boundary between them is so uncertain that it would be quite fair to interpret both solos as phenomena of both vocal and instrumental nature. The described duel can be presented as a symbol of an era, the emblem of which is the mutual influence of the two specified musical elements that form a single whole in their dialectical opposition.

The first and most noticeable reason for such unity is the freedom of these performing areas from the problems of temperament, which significantly complicated the work of baroque instrumentalists.

The next aspect is related to the specifics of sound delivery. In her work, Bloem-Hubatka repeatedly compares the process of singing with a similar process of producing sound on a trumpet. Despite the fact that the human voice is undoubtedly a much finer and more refined mechanism, this juxtaposition still allows observing phenomena of a similar nature. In the production of sound on the trumpet, the same decisive importance is inherent in a "solid" sound attack with a strong breathing support - with the difference that the point of application of this attack is the trumpeter's embouchure (from the French *bouche* - mouth) - a special position of the tongue and lips, which the performer firmly presses to the instrument mouthpiece. By changing the tension of the lips, the pitch of the trumpet changes. Thus, the performer's lips play the role of vocal cords, and the aperture between them vibrates in a similar way, allowing the flow of air.

At this stage of our research, we consider it expedient to change the focus of attention and move on to consider the features of the functioning of the newly announced baroque phenomenon - an instrument whose performance capabilities also reached their limit at that time: after all, the historical period of the baroque is often called the "golden age of the natural trumpet".

Let us specify a notable feature: the baroque trumpet and the voice of castrato singers have points of intersection in the field of timbre semantics. The well-known historical function of the natural trumpet, the existence of which dates back to ancient times, is a signaling instrument. Its other but less emphasized semantic aspect is sacred one (ritual, magical), essential for the cultures of the peoples of Africa and the Mediterranean, which, in particular, is pointed out by Tomasz Ślusarczyk in his dissertation [16]. The author draws attention to biblical evidence in favor of the fact that in ancient times the timbre of the trumpet was interpreted as the voice of God (in turn, the analogy with the unearthly, "angelic" sound of the voices of castrato singers becomes surprisingly clear). The researcher emphasizes that namely this aspect related to historical symbolism is "the most important element that connects the trumpet used several thousand years ago with the baroque trumpet..." [16, p. 14]. The historical sacred symbolism of the trumpet acquires new shades in the Baroque era. N. Harnoncourt, emphasizing the important role of number for the Baroque era, notes that the natural overtone series of the trumpet was a literal, living embodiment of the theory of proportions. "Hence it could only be used to symbolize God or the highest royal personages. C or D major with trumpets was reserved for the greatest lords; a situation from which trumpeters profited as they were accorded a status far superior to that of other musicians" [8, p. 62]. The social status of trumpet musicians was high and well-paid (the "golden age of the trumpet" is directly synchronized with the duration of the monarchy). In addition, the ancient elitist mission of the trumpet as a court instrument (the voice of power, the voice of God) is complemented by a new function - a solo virtuoso instrument. Like opera prima donnas, tenors, and castrato singers, trumpet performers are very popular, portraits are painted of them, odes are composed in their honor.

Authentic instruments that have survived to this day, illustrations and other works of fine art from the Baroque period give us an idea of the variety of forms of ancient trumpets. The analysis of iconographic sources allows concluding that during the European Middle Ages, the length of the trumpet was approximately 50–80 cm [16, p. 24]. "At the beginning of the 15th century, thanks to the lengthening of the trumpet to 150 or even 210 cm, the sound was automatically lowered by an octave. Music-historical studies indicate the existence of various forms of trumpets - straight, S-shaped, spiral, twice curved oval, etc.: "some have their trumpets built like a post horn, others like a snake, all coiled up (Praetorius 1619)"⁹. In particular, a new method of bending brass sheets led to the appearance at the beginning of the 16th century of such types of instruments as the tower horn (German *Thurnerhorn*), the ordinary trumpet (German *Hochtrompete*, English *clarion*) and military or field trumpets (German *Feldtrompete*). However, the difference in shape did not mean a difference in performance opportunities, since "the shape of the bend of the main trumpet does not affect the extraction or formation of harmonic tones in the instrument. The main role in the formation and location of the air column inside the trumpet is played by its hardware¹⁰ and the shape of the bell" [16, p. 24].

The range of natural trumpet, which contained two or three sounds from the old times, is radically increasing. "By saving the proportionate types of natural trumpet, the possibility of 'extracting' of full three-octave overtone row on the same instrument was obtained" [16, p. 24]. Reconstructing this scale, researchers present its different variants, according to the features of the instrument's composition. Guided by the specific tasks of our intelligence, we present the most complete version of this scale:

$$c - g - c^1 - e^1 - g^1 - b^1 - c^2 - d^2 - e^2 - f^2 - fis^2 - g^2 - gis^2 - a^2 - b^2 - h - c^3 - d^3 - e^3 - f^3 - g^3$$

Not all sounds in this range were perfect. "Since the 11th partial f^2 , was too high and ... hovers between F and F-sharp, while

⁸ Quoted from: <https://jak.koshachek.com/articles/farinelli-farinelli.html>

⁹ Quoted from: [8, p. 115].

¹⁰ Hardware of the trumpet is the ratio of its length and cross section.

rendering neither of these purely, and could therefore be called a musical hermaphrodite (Altenburg, *Trompetenkunst*, 1795)... and the 13th, a^2 , was too low, attempts were made to compensate for these impurities either with the embouchure or by making a transposition hole to be closed by the thumb. This raised the whole instrument by a fourth; now f^2 and a^2 became the fourth and fifth partials and could therefore be played in tune" [8, p. 115]. In particular, J. S. Bach often used in his works both the above-mentioned traditional semantics of the tone of the trumpet, which involved the image of "divine or worldly rulers", and the specific, false sounding of tones B-Flat¹, F² and A² "to represent terror, the dreadful, the devil" [8, p. 87].

It is significant that namely in the Baroque era, this instrument was raised to an unprecedented height. Once again, we have the opportunity to observe the baroque synthesis of naturalness and artificiality - the naturalness of the untempered natural arrangement, which relates this instrument to a living voice, and the difficult way of extracting the highest notes in the treble register. The difficulty of this process is described, in particular, by Johann Ernst Altenburg (1736–1801). The illustrious German trumpeter and son of a trumpeter emphasizes that this art requires an excellent breathing apparatus, endurance, flexibility of the tongue and an impeccable embouchure. However, these difficulties did not really stop the virtuosos of that time.

The debut of the trumpet in the opera orchestra was the overture (introductory "Toccata") in Claudio Monteverdi's opera "Orpheus" (1608). For the first time, an independent orchestral part was written for the trumpet. However, the very act of introducing this instrument to the orchestral score was a continuation of the long-standing tradition of opening a theatrical performance with a fanfare. In opera and theater orchestras of Western European countries, trumpets were usually combined with timpani and had a traditional semantic load: the appearance of a royal person or his envoys on the stage, various kinds of celebrations, etc. "Compositions for festive occasions called for trumpets and kettle drums", N. Harnoncourt notes. – "These, too, are usually incorporated into a four-voice texture and are generally only added to the oboes and violins for additional timbre" [8, p. 114].

Trumpets, like wind instruments in general, are gaining increasingly more independence in the orchestra. At the beginning of the 17th century, the natural trumpet began to function as a concert instrument in the field of sacred and secular music not only in Italy, but also in Germany, Austria, and Switzerland. Contemporary for the time treatises written by composers and performers were devoted to the art of playing the trumpet: "Tutta l'arte della Trombetta" by C. Berdinelli (1614), "Grund-richtiger, kurz, leicht, und nothiger Unterricht der musikalischen Kunst" by D. Speer (1687), "Modo per imparare a suonare di tromba. Frankfurt" by G. Fantini (1638).

In the process of performance practice, the range of the instrument was spontaneously divided into three main registers:

1. The lowest - *field* (performed by field pipes) $g - c^2$;
2. *Principale*: $c^1 - g^2$ (often did not exceed c^2 , playing in this register was also called the signal-fanfare playing);
3. *Clarino*: from c^2 to f^3 [16, p. 25–26].

Playing in these registers was often carried out on different trumpets, since the transition from register to register is associated with a difficult adjustment of the embouchure. T. Ślusarczyk cites additional and alternative register gradations practiced during the Baroque era:

clarino: c^2 do c^3 ;
contrclarino: $g^1 - g^2$;
quinta (sonata aŕo principale): c^1, e^1, g^1, c^2 ;
alto e basso: c .

The division of registers of the trumpet according to Edward Tarr looks as follows:

flatter - C; (rough)
basso grobstimme (rough bass) – c, g ;
vulgano (vulgar), *tenor* – g, c^1, e^1 ;
alto e basso – c^1, e^1, g^1, c^2 ;
principale (main), *quinta, sonata* – e^1, g^1, c^2, d^2, e^2 ;
clarinosecundae, contrclarino – $g^1, c^2, d^2, e^2, f^2, g^2$;
clarino, primarius – $c^2, d^2, e^2, f^2, g^2, a^2, h^2, c^3$ [16, p. 27].

The context of our research prompts us to focus on the highest of the listed registers – the *clarino*, in which the sounds were produced by "precedence" and which, in contrast to the strong and shrill sound of the *principale*, was characterized by a soft, velvety sound in the treble register. The Baroque era awarded the trumpet with a gentle, singing timbre, close to that of a flute. According to the German-English composer Gottfried Keller (died 1704)¹¹, the trumpet "learned to play softly" and create an ensemble with delicate flutes and weak human voices¹². The names of high instrumental registers containing the root "clar" or "cler" (high, clear) were used back in the 15th century in Germany, from where they came to Italy. Therefore, the term *clarino* should be understood not as an instrument with an appropriate range, but as playing in the high register, the style of such playing, etc. [13, p. 12].

Almost from the very beginning of the formation of the opera genre, the trumpet solo and singing began to actively interact in its environment. In opera arias, solo vocals are increasingly contrasted with trumpets. Opera arias with concert trumpets appear in the operas of Henry Purcell, Jean-Philippe Rameau, and Antonio Caldara. Alessandro Scarlatti actively uses the trumpet in the opera arias. The so-called trumpet arias move from opera to other major vocal-instrumental genres. Examples of such a transfer are the aria "The Trumpet Shall Sound" from H. F. Handel's oratorio "Messiah" and "Jauchzet Gott in allen Landen" – an aria from the cantata WWV51 by J. S. Bach.

Concerting of a solo trumpet (or two or three trumpets) is actively implemented in instrumental music as well. The principle of concerting a solo instrument or a group of instruments with voice and orchestra was vividly realized by Heinrich Schütz (1585–1672) in his "Spiritual Symphonies".

During the Baroque period, Western European composers of various countries created many works where the timbre of the trumpet is combined with strings and *basso continuo*. Among them, there are the opening and interlude sections of sacred works by Andreas Hammerschmidt (1611(12)–1675), Heinrich Schütz, trumpet sonatas and basso continuo by Girolamo Fantini (1600–1675), whose work became decisive for formation of the solo trumpet as a concert instrument. Alessandro Stradella (between 1639 and 1644–1682) and Carlo Pallavicino (around 1630–1688) made a major contribution to the development of the virtuoso *clarino* style.

The separation of solo instruments and *concertino*¹³ instrumental groups from the baroque orchestra led to the creation of new instrumental genres - the church sonata, which later developed into the classical sonata and concerto. A significant place in the samples of the mentioned genres was occupied by the trumpet, in particular, in the works of Maurizio Cazzati (1616–1678), Giovanni Paolo Colonna (around 1640–1695), Petronio Franceschini (around 1650–1680), Giovanni Battista Bononcini (1670–1747), Domenico Gabrielli (1651–1659).

The creators of the violin concerto - Antonio Lucio Vivaldi (1678–1741), Arcangelo Corelli (1653–1713), and Giuseppe Torelli (1658–1709) - greatly contributed to the flourishing of the trumpet as a concert instrument, creating complex pieces for the *clarino* trumpet. Vivaldi's works for the trumpet include his concertos for this instrument, concertos for two flutes, oboe,

¹¹ Gottfried Keller (or Godfrey Keller, died 1704) - harpsichordist and composer who lived and worked in Germany, and in the last years of his life - in England.

¹² Quoted from: [13, p. 17].

¹³ The baroque opposition of *solo i tutti* is reflected even in the construction of the harpsichord keyboard, where there is a division into different timbre registers. Another analogy is the registers of the organ, with which the instruments of the baroque orchestra were identified.

English horn, two trumpets, violin, two violas, string quartet and two harpsichords, as well as nine concertos for five trumpets and string orchestra, three concertos for violin, trumpet and string orchestra, two concertos for two trumpets with string orchestra and organ. In particular, in the works with the participation of the concert trumpet, a characteristic feature of Vivaldi's style is manifested - a variety of tempo and dynamics, which is evidenced by a significant number of relevant textual marks. This feature (innovative at the time) is an echo of the dynamic and tonal richness of baroque solo opera numbers.

“Without the birth of the *concerto grosso* genre in the works of A. Stradella and A. Corelli, the reduction of *concertino* to *solo* by one performer, carried out by J. Torelli, would hardly have been possible”, V. Rakochi notes [14, p. 65]. In Torelli's creations, we find works for both one and two solo trumpets. His 28 sonatas for one or two trumpets, strings and bass, as well as his Sonata No. 1 for trumpet, string orchestra and organ, concerto for trumpet and strings, symphony for two trumpets, strings and organ are known. Tomaso Giovanni Albinoni (1671–1751) made his contribution to the development of the concert trumpet. Two concertos for trumpet and string orchestra belong to the composer.

In addition to Italians, composers from other European countries also wrote for the solo trumpet. Thus, the sonatas and concertos of Johann Heinrich Schmelzer (about 1623–1680), Antonio Bertali (1605–1669), Johann Samuel Endler (1694–1762), Johann Friedrich Fasch (1688–1758 (the works of this composer were published only after his death)) have survived to our time. In the Habsburg Empire, there were orchestras and ensembles at the courts of the nobles, in which first-class Czech and Austrian musicians worked. These musical groups stimulated the appearance of numerous works for solo instruments and orchestra, including concert trumpet. In particular, such high-level ensemble was created at the court of the Prince Archbishop of Olmütz, Karl Count Liechtenstein-Kastelkorn, headed by the talented violinist and composer Heinrich Ignaz Franz von Biber (1644–1704). A considerable number of works were written by this musician for the team he managed. In particular, “he wrote a large number of quite important trumpet solos for the first trumpeter, Pavel Vejvanowsky, who later succeeded Biber as orchestra director” [8, p. 153]. In the middle of the 20th century, professional musical circles had the opportunity to familiarize themselves with the music of Pavel Josef Vejvanovsky, a Czech composer (about 1640–1693). Among his found works, there are a serenade and two sonatas with the participation of *clarino* trumpets. In one of the sonatas, the composer even uses the chromatic sounds of the upper range of the trumpet. Georg Phillip Telemann (1681–1767) also wrote for the trumpet. His concerto for trumpet, string orchestra and *basso continuo* in D major, which also uses super high sounds of the overtone series are used, is frequently performed nowadays. The sonata for trumpet and strings by H. Purcell is also known.

The pinnacle of the virtuoso *clarino* style is the second Brandenburg Concerto by Bach in F major, where the *concertino* group, in addition to the trumpet, includes flute, oboe, and violin. Bach introduces the last overtone of the natural trumpet range - g^3 , a sound that is almost impossible to perform, in the trumpet part. It is assumed that this part was performed not by one, but by several trumpeters. In the 19th century, a special, highly tuned trumpet was made for its performance [17, p. 39].

The final stage in the development of the trumpet concerto in the *clarino* style is the works of the mid–18th century German composer I. M. Voltaire.

The “golden age of the natural trumpet” lasted until the second half of the 18th century - the revolutionary times of the breakdown of the Western European social system. With the fall of the power of the monarchs, the need for its musical symbol - trumpets and fanfare - disappeared, and therefore this art had to undergo its decline. The last of the pedagogical treatises dedicated to playing the trumpet (“Versuch einer Anleitung zur heroisch-musikalischen Trompeter- und Paukerkunst”, 1795) was written by J. E. Altenburg with the aim “to help restore the

position and meaning of the trumpet. But it was not possible to achieve this. Altenburg's work reminded only of the lost art and traditions of the old order” [16, p. 17].

4 Conclusion

The examination and comparison of the features of solo singing and the natural trumpet as related concert instruments of the Baroque period made it possible to make sure that the compared spheres have a similar nature. Their functioning during the specified historical period has features of ‘kinship’ in various aspects.

In accordance with the dominant trend of the time – the active mutual influence and interpenetration of vocal and instrumental principles – *bel canto* solo singing and the *clarino* style during the Baroque period functioned as concert oppositions similar in their performance qualities. This often resulted in joint concerts.

Free from temperamental mensuralty, these spheres are based on a similar sound production apparatus: the embouchure of a natural trumpet is a peculiar (albeit comparatively more primitive) analogy of the gap between the vocal cords; in both situations, a hard sound attack (*coup de glotte*) is used.

The *bel canto* style and the *clarino* style are characterized by similar tonal semantics. The most obvious feature of their similarity is, of course, the use of high (and even super high) tessitura. In addition, sacred associations related to the timbre of the trumpet, historically rooted in the ancient cultures of various peoples, are correlated with similar associations regarding the timbre of the voice of castrato singers - the actual founders of the old Italian school of singing. The consequence of the functioning of this kind of semantics was the widespread singing of castrati in temples, as well as its metaphorical identification with the “cry of an angel”.

Another parallel appears in the process of considering the investigated phenomena through the prism of the theory of affects - the aesthetic basis of the processes and trends that took place in the musical art of the Baroque era. Affects produced in vocal performance practice were realized in specific musical figures in the *da capo* aria. These figures in their complex constituted a kind of mediated signal system - a kind of dictionary. “Lexemes” of this dictionary, in the process of active interaction of vocal and instrumental spheres, freely passed from opera arias into the musical fabric of instrumental works - sonatas and concertos, where they were recognized without the corresponding verbal text. Subsequently, an interesting reverse process of the transition of musical and rhetorical figures from instrumental music back to singing took place (in particular, in the music of J. S. Bach). The specified method of embodying various affects in music helps to see the essential common feature of the performance specifics of solo vocals and trumpet: an organic fusion of naturalness and artificiality, the “instrumentality” of the voice and the “vocality” of the trumpet, typical of the Baroque.

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Primary Paper Section: A

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CONSTRUCTION ECONOMICS AS AN INDICATOR OF MACROECONOMIC TRENDS

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Abstract: The article considers the dynamics and vectors of the construction development on a country and global scale, in the context of the macroeconomic impact and in the conditions of the corresponding dynamics of the environment. The role of sustainable construction in the modern world is shown. The role of the construction in the national wealth and well-being of individual countries is assessed. It is shown that investments in the construction produce a significant multiplier effect. Based on statistical data, it has been demonstrated that an increase in investment in housing construction can become a multiplier for the development of many related industries and regions, and one of the foundations of economic growth, including in the context of digitalization of the construction and the development of green building.

Keywords: construction; construction economics; macroeconomic indicators; housing investment; economic growth; green building.

1 Introduction

In any country, each branch of the national economy, in addition to the function of directly meeting the needs of society in certain types of goods or services, also performs specific macroeconomic functions. The most obvious of these is the function of interaction with other industries, i.e., the function of participation of any industry in the overall process of development of the economy as a whole. The second macroeconomic function primarily concerns the sectors that are part of the circle of fundamental, basic ones, and consists in their peculiar participation in the preparation of the “macroeconomic future” of the country. This means that the scale and “quality” of the development of any basic industry in the present to a large extent determine the possibilities of the national economy in the future, “preparing” for it either the preservation of the previous structure and pace, or accelerated development, or the emergence of new “bottlenecks” and restrictions which will remind of the inseparable connection of the present and the future with the past, of the need for timely macroeconomic regulation of proportions in the economy, etc.

The participation of basic industries in the preparation of the “macroeconomic future” directly predetermines the fulfillment by them of another macroeconomic function - the preparation of information on the possible macroeconomic prospects of the country in connection with the current volumes, structure and planned development forecasts for these industries, i.e., function of an indicator of possible macroeconomic prospects. At the stage of transition to the post-industrial era, the main sectoral indicators of macroeconomic prospects were the branches of science, education, telecommunications services and high technologies, since namely on their basis the process of qualitative transformations of the economy of advanced countries is taking place, the transition of civilization to a higher stage of development is being prepared. At the same time, the ongoing changes in the nature of basic and leading sectoral macroeconomic indicators, of course, do not mean that the function of such indicators is completely lost by traditional basic sectors, especially since for most countries of the world post-industrial sectors have not really become the most vital ones, since a very wide range of tasks of the previous stage of development remains.

Among all industries capable of performing the function of a macroeconomic indicator of future changes and prospects, it seems appropriate to highlight the construction, which, in our opinion, can successfully perform this function in economies of any type and at any stage of society maturity. Regardless of whether this society is industrial or post-industrial, the state of stagnation (or, moreover, recession) in construction will always signal a slowdown (in the present and near future) in the development of the economy of a given country as a whole, as well as an

accelerated pace of development of this industry will serve as a sign of a change for the better in the country's economy.

Situational macroeconomic and geopolitical conditions have significantly actualized the issues of effective tactics, the possibility of flexible correction of goals, objectives, and indicators of the state of construction enterprises in world and especially regional markets. The strategic guidelines of the industry are to strengthen competitiveness, provide the material basis for the quality of life, and shaping a business environment.

In addition, trends in sustainable development and the digital economy are having a direct and critical impact on the construction. Thus, a systematic study of the relationship between the development vectors of the construction and the dynamics of macroeconomic indicators seems to be a very relevant scientific task.

2 Materials and Methods

In the course of the study, methods of a systematic approach, behavioral economics, forecasting, statistics, innovation studies, methods of analysis and synthesis, as well as the methodology of a value-oriented approach were used. The study was carried out using macroeconomic analysis and investment theories of economic growth.

3 Results and Discussion

In the 21st century, an investment and construction complex can be attributed to a complex self-organizing open system [2]. Periodic changes associated with improving the quality of the process of self-organization of the construction and investment complex are evolutionary, since the ongoing changes are of a bifurcation nature and lead to a change in development attractors. Bifurcation in this context refers to all kinds of qualitative changes (restructuring, metamorphoses) when changing the parameters of the objects under study. Moreover, such bifurcation changes can be caused in the system of the construction and investment complex both by internal contradictions and by various external factors.

The construction (and corresponding investment) complex has experienced more than one bifurcation change in its development, which was caused by contradictions that formed at the end of the 20th century. It is also possible to single out fundamental contradictions that, most likely, have developed between the goal of a market economy that makes profits, and the economic system as a whole, which creates high-quality objects using fixed assets.

Contradictions also arise between the quality of the production base and the dynamics of development in the construction industry. These contradictions are connected with investments and volumes of the complex. Such complexes also have structural imbalances, which in most cases are due to insufficient funding for especially unprofitable, but necessary areas in construction. Although an evolutionary stage is observed in the development of the construction complex, this does not mean the cessation of changes, since, based on the methodological approach to socio-economic development, economic processes are undulating.

The construction is often criticized for being too conservative, especially for bureaucracy in document management and standardization, so this industry is still considered to be lagging behind in the implementation of digital technologies. Difficulties in the use of advanced technologies in the construction segment are primarily associated with stringent requirements in the construction of facilities - these are increased safety requirements. Therefore, each new technology that is being introduced must have standardization taking into account safety precautions, a regulatory framework, and a final cost with self-sufficiency. The final cost, taking into account its development, necessarily must be adequate to efficiency, taking into account the reduction in the present and future costs, and prolonged in

time. Advanced technologies, like everything new, require the appropriate design of the complex and the work attached to it, with the involvement of qualified specialists (project team) as the project managers and quality control.

Although the use of digital technologies provides a large number of advantages in the implementation of the project, nevertheless, it requires qualified personnel and increased material resources, and it is the task of the state to provide an advanced regulatory and technical framework and a legal foundation.

One of the promising areas of digitalization in construction is 3D printing. Truck-based “printers” already exist that allow brick buildings and other technological solutions (for example, printing from concrete) to be “printed”. So far, low-rise construction is the most promising with the use of this technology. First of all, this refers to the direction of “3D Concrete Printing”, for which in the last decade a steady trend has been formed of an annual increase in the number of new scientific publications, that also contributed to the creation and development of a number of related areas of research in the field of building materials science related to the control of rheological and technological properties of dispersed building mixtures, control of the kinetics of hardening of materials based on mineral binders, dispersed reinforcement, and other ways to improve the strength characteristics of composites of hydration hardening in tension in bending, etc. [3].

A very effective and promising direction is the introduction of integrated building condition sensor systems that allow monitoring the main building parameters, energy efficiency, and the state of infrastructure networks. The use of such a system, built in advance, allows significantly reducing operating costs, carrying out repairs according to the actual state.

The use of robotics is another interesting and promising area of digitalization. Demolisher robots are already being used for demolition work in conditions that pose a danger to humans. The development of machine vision technologies, various sensors, and artificial intelligence systems makes it possible to create construction robots [3]. A collaborative robot (cobot) is an automatic device that can work in conjunction with a human to create or produce various products. This will bring robotics out of the existing narrow niche and launch a wide range of robotic construction equipment on the market. Other promising areas here are the following: automatic self-propelled carts, which are widely used in industry, but so far little used in construction; aerial drones that can be used as an effective tool for monitoring the progress of construction work. Manufacturers plan to launch a wide range of robotic construction equipment on the market in the near future.

Automation of business management in construction also involves the use of digital technologies: centralized control over the purchase and consumption of materials, the use of construction equipment and working hours. One of the innovations developed by small businesses is special bracelets for construction workers that track their movements, workload, and health status. The use of modern software allows carrying out more effective control and standardization of the construction process. Data show that digitalization can lead to a productivity increase in the construction industry between 14 and 15 percent [22].

Also, the role of the “green” (environmental-climatic) factor in stimulating and meaningful filling of qualitative changes in the structure of the world economy and its main subsystems, changes that make up the essence of the modernization process, is significantly increasing. Its nature and dynamics will be determined not only by the scale and intensity of the use of high technologies (NBIC) of the V and VI orders, but also by the “green” vector of the mentioned changes, as a result of which environmental and climatic factors should turn from (exclusively) a limiter into an accelerator of economic growth and thanks to eco-innovations, to stimulate the transition to a qualitatively new model of the “green” economy [14].

This is confirmed, in particular, by the results of an authoritative expert estimation of the most promising technologies that have not yet become widespread, but have significant potential to transform the traditional way of life and socio-economic effect and are already attracting significant investment. Half of the top ten such technologies are eco-innovations in the field of water supply, energy, agriculture, as well as construction and transport [16]. In recent years, the eco-building movement has become increasingly complex and large-scale, a clear example of which is the trend to build entire eco-cities, where the natural environment, urban planning, development, communications, and the lifestyle itself are in harmony with each other. Among the newest and largest urban development projects are Masdar City in the United Arab Emirates, Houguan Lake near the city of Wuhan in China, the city of Songdo in South Korea, and others. The noted trend is clearly seen in the economic policy of the European leaders of “green” economic growth - Great Britain and Germany - whose governments and business circles consider the production of environmentally friendly and low-carbon products, equipment for protecting the environment, technologies for reducing climate risks and adapting to the consequences of climate change as the most promising direction of national exports, including in the field of building materials and technologies.

According to the UN-supported Principles for Responsible Investment (PRI), “responsible investment is an approach to investment that clearly recognizes the importance of the economic, environmental, social and governance factors of sustainable development, as well as the long-term health and stability of the market as a whole, to the investor” [5]. It recognizes that long-term sustainable income generation depends on stable, well-functioning and well-governed social, environmental, and economic systems.

Despite extensive efforts to assess sustainability aspects, few attempts have been identified in the academic literature to integrate and balance investors' and developers' responsibility for the local community, economy, and environmental issues with their financial expectations. However, it is very important to understand that from the point of view of developers and real estate investors, even if the investment is sustainable, it must be financially viable.

Methods based on a single criterion are unlikely to be effectively used to solve problems associated with a complex decision-making environment in choosing a suitable investment option. Therefore, the value and utility of various investment alternatives can be determined by multi-criteria decision-making methods (MCDM) [9]. There are many MCDM tools that can be successfully used to make decisions on various sustainability issues: Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS), Fuzzy Analytic Hierarchy Process (AHP), etc. However, it is clear that the development of green building and related certification (LEED, BREAM and the like) is a growth driver for the share of the service sector and public administration in GDP.

Nevertheless, “green building has created millions of jobs and contributed hundreds of billions of dollars to the U.S. economy, with the construction of LEED-certified buildings accounting for about 40 percent of green construction’s overall contribution to GDP in 2015” [18]. Moreover, there are evidence-based forecasts of significant growth in green building’s contribution to individual states’ tax contributions and environmental asset indicators at both the national and state levels [8].

Interestingly, if to look at statistics of quarterly GDP in volume terms for G20 countries (Figure 1) and correlate it with the data on green building market (Figure 2), simultaneous huge growth of GDP and green building volumes becomes evident.

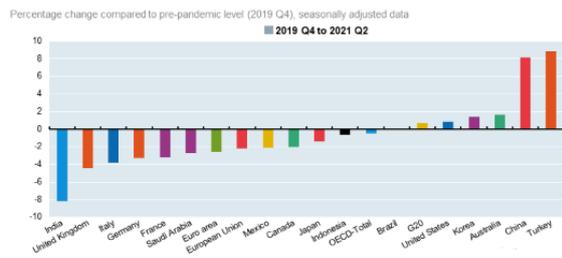


Figure 1. Quarterly GDP in volume terms for G20 countries [15]

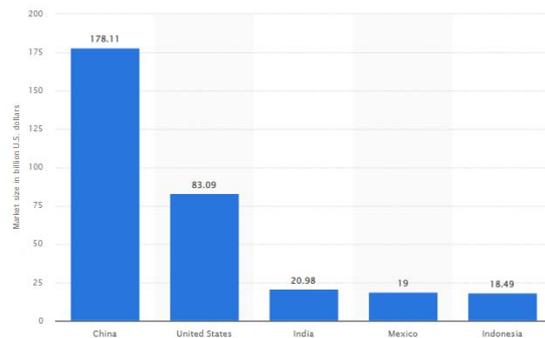


Figure 2. Size of the green building market worldwide in 2021, in selected countries (in billion U.S. dollars) [19]

Trends and development prospects in the construction on a global scale are analyzed by a wide range of reputable consulting companies and expert groups. Forecasts and analyzes of the global and regional construction markets from GlobalData, Global Construction, PWC (Oxford Economics), and The Business Research Company, as a whole, despite the difference in quantitative forecasts and estimates, demonstrated a similar opinion on the results of 2020 and the forecast for the medium term.

While the global construction has been recovering from the COVID-19 crisis, it has suffered huge losses in terms of lost revenue, with total production in 2020-21 nearly \$1.1 trillion lower than it would otherwise be the case. According to GlobalData's Global Construction Forecast 2025 Update Q1 2021 (UK), there is still a lot of uncertainty about how the COVID-19 crisis will 'play out' [8]. However, the forecast for global construction volume is based on the assumption that governments and health authorities will not reintroduce strict lockdown policies and that construction sites can continue to operate with minimal disruption.

At the same time, the recovery in many construction markets at the end of 2020 came as a surprise. This means that the annual result in 2020 was not as bad as it was previously expected. The global construction market showed growth from \$11,491.42 billion in 2020 to \$12,526.4 billion in 2021 at a CAGR of 9%. Growth is mainly due to companies restructuring their operations and recovering from the impact of COVID-19. According to a GlobalData report, the market is expected to reach \$16,614.18 billion in 2025 at a CAGR of 7% [12].

The Asia-Pacific region was the largest region in the global construction market, accounting for 42% of the market in 2020. North America was the second largest region, accounting for 26% of the global construction market. Africa region was the smallest one.

According to the Global Construction 2030 (UK) report, 2020 was not the worst year for the construction, unlike for many other sectors of the economy. Construction has remained a priority industry in most countries, and this allowed it to continue operating during lockdowns. In addition, the "work

from home" order encouraged people to invest more in their own housing. Of the 90 countries included in the Global Construction 2030 report, 16 saw a double-digit decline in construction in 2020; with Panama (-30%), Singapore (-25%), and the Philippines (-22%) experienced the hardest hit. But there are countries where there was significant growth: in particular, Saudi Arabia (+15%) showed double-digit percentage growth [7].

According to Global Construction experts, construction is likely to lag behind the growth of the global economy in the coming years, especially as it is more affected by the lack of public finances, despite the fact that many countries have announced increased investment in infrastructure. Over the next two years, as the world emerges from the COVID crisis, construction volumes worldwide will increase by an average of 3.2% per year. In the term 2023-2030, construction is projected to increase by an average of 2.3% per annum globally, with annual growth rates varying from a decline in Japan (-0.5% per annum) up to an increase exceeding 8% per annum in Tanzania (+8.4% per annum), Ethiopia (+8.4% per annum) and Bangladesh (+8.0% per annum). According to the publication's experts, the value of global construction production in US dollars at constant exchange rates and in 2020 prices will increase from \$11.6 trillion in 2020 to about \$14.8 trillion in 2030, while the growth rate will average 2.5% per year. China is expected to remain the world's largest construction market, but will decline from 32.0% of the world's total in 2020 to 29.2% in 2030. Japan's contribution to the total is also expected to decline from 7.0% in 2020 to 5.4% in 2030, when it will be overtaken by India as it becomes the third largest construction market in the world. The publication expects Indonesia to surpass France and Australia to become the sixth largest construction market in 2030, while France will drop from the sixth largest in 2020 to the eighth largest in 2030 [8].

An important driver of the global construction market will be the fact that annually between 2020 and 2030 around 43 million new homes will be needed worldwide, of which 11 million in India, 7 million in China, 2 million in Nigeria, and 1.5 million in the USA. Brazil, Pakistan and Indonesia are expected to require over a million new homes each year [4].

According to the PWC (Oxford Economics, UK) report "Capital Projects and Infrastructure Spending: Forecast to 2025", infrastructure spending has begun to recover from the global financial crisis and is expected to increase significantly in the next decade. Experts draw a conclusion based on an analysis of 49 countries that account for 90% of world economic production. In developing this analysis, Oxford Economics used datasets to provide consistent, reliable, and repeatable measures of projected capital projects and infrastructure spending both globally and across countries. Historical spending data was taken from statistical sources of governments and multinational organizations. Forecasts are based on private economic models developed by Oxford Economics at country and sector levels.

According to experts from Oxford Economics, the world's spending on the construction of infrastructure facilities will increase to more than 2.5 times by 2025 compared to 2012 [16]. But the recovery will be uneven. Meanwhile, emerging markets, unburdened by austerity or weak banks, will see accelerated growth in infrastructure spending, especially in China and other Asian countries. At the same time, megacities in both emerging and developed markets - reflecting changing economic and demographic trends - will create a huge need for new infrastructure. These paradigm shifts will leave a lasting, fundamental imprint on infrastructure development for decades to come.

According to the forecasts of analysts from The Business Research Company (India, UK, USA), the trends in the global construction market until 2021 already included the use of autonomous construction machines, digital technologies to improve construction safety, and more. Global construction market data from The Business Research Company's latest study of the global construction shows that the market is expected to grow at a compound annual growth rate (CAGR) of 7.5% from

2021 to reach 15 trillion dollars in 2023 [12]. A growing trend in the global construction is the use of autonomous construction machines, digital technologies to improve construction safety.

Construction companies will increasingly use autonomous construction vehicles to increase productivity. These automated vehicles are equipped with sensors, cameras, and GPS. Real-time data from these devices helps to remotely monitor the jobsite and reduce construction time. Vehicles connected via the Internet of Things, RFID (Radio Frequency Identification) tracking technologies are also helping the construction to be more efficient and safer.

Leading manufacturers such as Komatsu, Caterpillar, and Volvo CE are constantly releasing new models of autonomous, semi-autonomous, and remote controlled excavators and other heavy equipment. Royal Truck & Equipment is conducting pilot tests with the Florida Department of Transportation (USA) for unmanned trucks for work areas.

According to a report by The Business Research Company, the construction market is highly fragmented with many small players. The top ten players account for about 4.7% of the market. This is mainly due to the presence of a large number of small players that serve the local population, since most clients use construction services located closer to their location. However, large companies play a leading role in large infrastructure projects. The main market players are China State Construction Engineering Co., Ltd., China Railway Group Ltd., China Railway Construction Corporation Limited, China Communications Construction Group Ltd., Vinci S.A., and others.

Strategies currently adopted by key players in the construction industry include, among others, investing in green building projects and expanding business through strategic partnerships and acquisitions of companies from developing countries. In addition, large foreign construction companies are increasingly using green building technologies to build energy efficient buildings and reduce construction costs. Green building refers to the practice of using sustainable building materials and building processes to create energy efficient buildings with minimal environmental impact. According to the 2018 Global Green Building Trends Survey, about 47% of surveyed companies believe that they will build about 60% of their projects using green technologies in the nearest couple of years [23].

With the implementation of the most favorable forecast (The Business Research Company and GlobalData), the volume of the global construction market from 2020 will increase by 25% in 2023 (from 12 to 15 trillion US dollars) and by 42% by 2025 (from 12 to 17 trillion US dollars). If a less favorable scenario is implemented, the threshold of 15 trillion US dollars will be reached only in 2030 [7].

Based on the estimates of international experts, it can be concluded that in the medium term, the projected growth of the world economy of 2.9-3.0% can be achieved, in particular, through the restoration of investment in construction projects, the revival of related industries and trade in construction services.

The pandemic has acted as a catalyst for innovative changes in business processes in construction, revealing the competitive advantages of remote working methods. Accordingly, in the coming years, the entire construction management system should change qualitatively in the direction of a digital format of work in a single information environment. The construction sector is experiencing significant difficulties and restrictions caused by macroeconomic and geopolitical changes, reduced demand and solvency. At the same time, socially oriented management will have a positive effect on the regional and global market in the face of strategic uncertainty. Meanwhile, in the US, residential construction spending, as opposed to non-residential and public, showed significant growth during the pandemic (2019-2020) (see Figure 3 below).

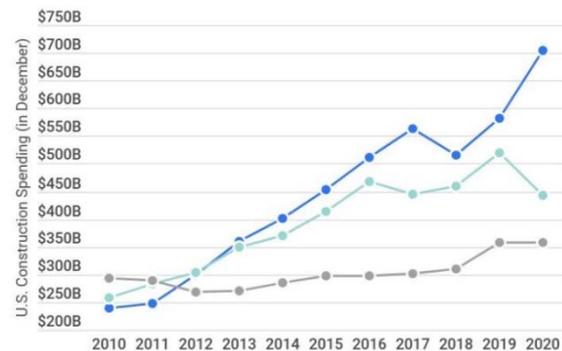


Figure 3. U.S. construction spending 2010-2020 [10]

“Since May 2020, about 931,000 jobs have been added back to the industry. From March to July 2020, the residential deck construction rate increased by 275%” [10]. It is predicted that there will be approximately 300,200 more construction jobs in 2029 than in 2019.

This phenomenon has its explanation: “Construction is typically much more volatile than the overall economy. Reduced economic activity results in less demand for new commercial or industrial facilities, and ambiguity further dampens investment. Loss of income and lack of consumer confidence negatively affect demand for housing construction or refurbishment. And as the value of buildings and infrastructure closely tracks GDP, the need for new construction activity is highly sensitive to GDP growth, even in longer-term models. A four-year slump, for example, could substantially reduce construction’s share of GDP above and beyond the initial contraction—even though the current crisis is not primarily related to real estate, as it was in 2008. On the upside, unprecedented public-relief packages could not only support a rapid recovery but also be followed by public-investment programs” [13].

The modern world market for construction services has all the signs of a formed market: demand, supply, frequency of transactions and their significant volume, activities of specialized firms providing construction services. The activity of these commercial organizations is connected with the coordination of intersectoral relations and other commodity markets. At the same time, the construction services market should be distinguished from other related markets, for example, the engineering services market and the complete equipment market.

The development of the modern world market for construction services is associated with an increase in information and technological support; the price of construction services is increasingly less associated with material costs. The key methods of competition in the construction services market are logistics and engineering. The timely delivery of high-quality materials and complete equipment plays an important role in saving costs during construction [1].

Within the framework of the global economy, the construction services market has the following meanings that worth mentioning:

- In some countries, construction services also form completed real estate objects, which contribute to the growth of the socio-economic development of the state;
- Meeting the needs of people and society in housing;
- The construction forms an unfinished production cycle, which in the future will include, for example, reconstruction, repair, rental services, etc.;
- Due to labor intensity, the construction forms a large share of employment in the global economy.

Analyzing the trends in the functioning and development of the world market for construction services in the context of today’s globalization, one can outline the following distinctive features [2]:

- The basis of foreign trade in construction services is the project-oriented internationalization of the economy;
- The largest exports of construction services are energy, transport and urban construction;
- The modern construction business is characterized by a complex organizational structure for the introduction of entrepreneurial activities;
- The world market of construction services is closely interconnected with such processes as investments, movement of individuals and intellectual capital;
- The modern market of construction services is being transformed from a construction market into an investment and construction complex;
- The world market of construction services does not have a high level of market share concentration in the hands of individual organizations. Reverse processes are inherent, such as flexibility and market competition;
- The trend in the development of the world market of construction services is the process of increasing privatization of the housing and communal complex in various countries, which leads to the creation of new enterprises;
- The modern market of construction services is faced with the process of increased liberalization of state regulation and creation of institutions of self-regulation.

The above processes give solid grounds to conclude that in the next 10-20 years, despite the decrease in the unit costs of construction work and vice versa, the impact of scientific and technological progress, the demand for construction services and works will only increase. In particular, this applies to the Asian region, where the process of demographic growth is many times higher than in other parts of the world, and thus, all the prerequisites are being formed that namely countries such as China and India will become world leaders in terms of volume and capitalization of the construction services market. Today, the world leader is the United States, followed by China. At the same time, Japan, the third country in the world in terms of capitalization of the construction market, is 2 times inferior to them. Among the other countries in the TOP-10 there are India, Germany, France, Italy, South Korea, and Spain.

Thus, the current trends in the functioning and development of the world market for construction services in the context of globalization provide prerequisites for an increase in the volume of capitalization of the industry, an increase in its share in GDP, and a shift in focus towards innovative technologies and environmental safety.

Back in 1993, a World Bank paper was published, that used data from many countries in the post-war period. It was determined that housing investment in GDP is very small, about 2-4% when GDP per capita is below 1000 USD, but quickly starts to grow, up to 8% of GDP when GDP per capita reaches 1000-5000 USD, then their growth in GDP slows down again and remains at a stable level when GDP per capita reaches a higher level [1].

More recent work by Berns and Grebler (cited in Abdulai et al. in the work published in 2018) hypothesized that the share of investment in residential construction in GDP is related to the stage of economic development in an inverted U-shaped manner: the ratio first increases with increasing GDP per capita, when the economy is gaining momentum, but peaks as the economy enters a middle-income period and then tends to decline as the economy becomes advanced. This hypothesis is currently confirmed theoretically and empirically and is used in research in this area [1].

In addition, in his article of 2007, Leamer proves that housing investment, being a key component of the developed countries' GDP, is the most important early indicator of an upcoming recession - the best predictive indicator of the economic cycle [11]. That paper concludes that residential investments in the US have a consumer rather than a production business cycle and, accordingly, their contribution to GDP depends on consumer expectations and preferences, while housing investment can have a random impact on normal economic growth. At the same time,

a weak housing sector increases the threat to economic growth during crisis and recession periods of economy development.

Many studies basically support the theory that GDP growth is a driver of housing investment growth. At the same time, a number of works substantiate the conclusion that housing investment in itself can be a multiplier of economic growth [6].

In developed countries, where a free housing market has existed for a long time, significant information material has been accumulated on the relationship between housing investment, housing market development, and economic growth. The main method for studying the relationship between housing investment and GDP is the Granger non-linear causality test based on the vector autoregression (VAR) method. According to this method, "the degree of influence of one system on another is estimated by the change in the accuracy of predicting the behavior of the first system when data on the fluctuations of the second system are introduced into the predictive mathematical model. A decrease in the forecast error is interpreted as a sign of the influence of the second system on the first one" [14]. To implement the Granger test, stationary data are selected, autoregressive parameters are formed with a certain lag length, and the vector autoregression model is evaluated. If the time series are not stationary, but integrated up to the first order, their difference is applied to bring them to a stationary form.

In more in-depth studies of the housing sector, Chinese economists apply the Granger method which allows tracing a deeper relationship between the studied phenomena, and use quarterly data to lengthen the time series. These studies show that housing investment is currently having a significant long-term impact on the Chinese economy [21].

According to independent analysts, the construction affects the activities of more than 20 related sectors [22]. In addition, defining a high-tech industry that is actively developing in this chain, one can single out the construction industry, the construction complex of specific regions. Namely in the construction, the transition to digital modeling of the construction process - BIM-design (Building Information Model) - is quite active. Studying covering the issue of digital processes in the construction in the scientific literature, it is possible to single out both publications that address issues of problematic aspects of the transition of construction organizations to the digitalization process [4], and works that describe the advantages of BIM technologies in the context of the prospective development of territories [2, 7, 16]. The construction industry is considered quite capital-intensive, it provides a significant number of jobs, and the product of its creation is intended to meet the basic needs of society (housing, infrastructure, roads, etc.), so the availability of scientific, technical, and production capabilities helps to form an order for search the best technological solutions, innovative technical developments, which affects the efficiency of the economy as a whole.

The innovative development of the construction sector is aimed at improving the main technical and economic indicators of the formation of construction products, including reducing the cost of facilities, reducing the standard construction time and improving the quality of facilities. As a result, it becomes possible to make the most optimal use of investments from other sectors of the economy in its development as a whole, including innovative ones [2].

There is a mutual influence of the macroeconomic situation and growth dynamics in the construction. In particular, massive government investment and tourism are prime drivers for construction in GCC countries (see Figure 4 below).



Figure 4. Drivers for construction growth in GCC countries

The level of development of the housing sector and its impact on the economic growth of the country and regions is an important factor in the formation of the economic and social policy of the state, that is, in particular, public spending as one of the important macroeconomic indicators. Investments in housing construction and renovation of residential buildings form housing investments, which are part of investment in the economy. The development of housing construction increases the gross domestic product, creates demand for the products of related industries and transport. Moreover, the development of the housing sector affects the mobility of the labor force, the efficiency of its use, as well as the level of human capital in general. Economic policy in developed countries largely pays attention to the state of the housing market and residential construction, using various types of indirect impact on its development. This attention to the housing sector is due to the multiplicity of empirical evidence of the multiplier impact of housing market development on the economic growth of countries and regions.

The main contentious point discussed by economists for a long time the question of which process is a predominant one: whether housing investment can allow a country to increase GDP, or whether GDP growth leads to an increase in housing investment, as well as the question of how this process works in developed and developing countries. This article does not aim to cover the entire spectrum of economic views on the role and place of the housing sector in economic development, but we made a selection of information on the issue of housing investment and economic growth. Although housing investments in general include not only investments in the construction of houses, but also investments in repairs and renovation of existing housing, the main focus of economists is on the segment of investments in residential construction.

Investments in the housing sector represent one of the areas of investment spending and this is the main factor in stimulating household savings. As studies by American scientists have shown, there is a relationship between housing affordability and demographic processes: if the cost of housing decreases by 10%, then the number of families increases by 0.25% [9]. If to consider this from the point of view of the theory of the life cycle of savings, then an increase in the share of the young population should entail an excess of savings over their expenditures, i.e., an increase in net total savings [2]. Thus, an increase in investment in housing should lead to an increase in the savings rate, which, as already noted, serves as a source of investment resources and acceleration of economic growth. This conclusion is, of course, not unambiguous. Speaking of the young population, in this case, apparently, the working population should be kept in mind. Therefore, at the initial stage, population growth may even lead to a relative decrease in economic growth (i.e., a decrease in per capita income). That is, one can talk about the long-term aspect of an increase in the savings rate, which, apparently, will occur with a significant time lag.

The improvement of living conditions affects the increase in production also from the other side. If to analyze the production function, which links the volume of output with the costs of production factors (resources) and with the level of technology (total productivity of factors), the improvement of housing conditions is seen both directly and indirectly a factor in economic growth.

According to the data of Statista Research Department, “the construction market in the United States is one of the largest in the world, with private spending still increasing on a year-to-year basis, and with roughly 8 million people employed in the industry. It is expected that new construction put in place will total 1,449 billion U.S. dollars by 2023. To maintain its competitive standing, the construction must overcome various barriers, including those within the industry and external complications like the state of the U.S. economy. Currently, a shortage in skilled labor has slowed the speed of on-site projects and making it even more difficult for encouraging new talent to begin [20]. Value added by the construction as a share of gross domestic product in the United States from 2000 to 2021 is shown in Figure 5 below.

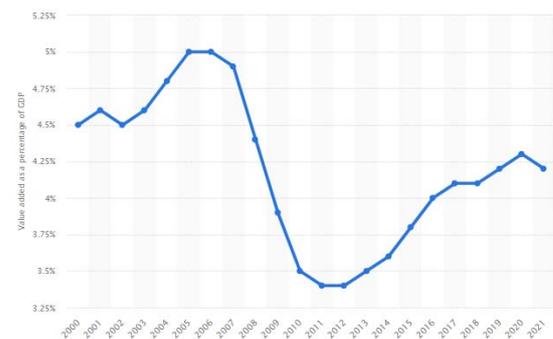


Figure 5. Value added by the construction as a share of gross domestic product in the United States from 2000 to 2021

Thus, overall systemic ties and correlations between construction and macroeconomic indicators appear exclusively complex, mutually determined, and regionally- and country- dependent, and to predict the overall effect of investments in the construction sector of the economy, as well as the corresponding generalizing (multiplicative) effect, it is necessary to develop a dynamic time model. However, the overall trend is evident – construction, uniting in itself digitalization and greening as drivers of Industry 4.0, occupies one of the core places among the factors of national economies’ growth and is capable of improving macroeconomic indicators even during crisis time (as pandemic period evidence demonstrates). In general, the development of international trade in construction services is important for both the national and the world economy, providing an increase in added value and creating a basis for the development of other industries and the economy, stimulating the transfer of technologies and investments, ensuring an adequate level of employment, income, and level of the life of population.

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Primary Paper Section: A

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REPERTOIRE POLICY AS A BASIS FOR THE DEVELOPMENT OF PERFORMANCE SKILLS OF AN INSTRUMENTALIST MUSICIAN

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Abstract: The article considers the role of repertoire policy in the development of the skill of instrumental musicians, as well as the features of the formation of repertoire policy at the present stage, in the context of post-industrial social relations. It is shown that one of the main trends in modern instrumental music is synthesis, in the broad sense of the word: the synthesis of arts, the synthesis of various genres and directions of music, that is, the synthesis in the sense of dialogue and flexibility of the musical space. The phenomenon of experimental music and its influence on the conceptualization of the skill of a musician-instrumentalist and repertoire policy are considered, in particular, within the concept of neoconceptualism.

Keywords: experimental music; instrumentalist musician; neoconceptualism; repertoire.

1 Introduction

The factors of the efficiency of the musician's activity are expressed in the professional skill of the performer. In the professional description of the professional skill components, it is advisable to single out four main blocks: musical and performing orientation, knowledge, skills, and professionally important qualities of a musician.

The musical performance direction includes a number of components. First of all, one should note such a common moment for all professions as prestige, the significance of which is shown in a number of works and is beyond doubt [13, 17]. A large number of sources indicate the love of music as a common professional orientation of all musical specialties [21]. Finally, the structure of the musical performance orientation would be incomplete without the inclusion of the need for stage self-expression in it [1]. This orientation is also associated with the need for musical and aesthetic education of people and is realized in the process of achieving three hierarchically ascending goals: 1) emotional impact on listeners associated with the regulation of their emotional states and the formation of adequate emotional reactions; 2) formation of the listeners' ability to perceive musical images; 3) formation of listeners' musicality.

At the same time, the professional realization of a qualified performing musician involves not only mastering a complex of professional knowledge and skills, but also realizing oneself as a part of the artistic culture of society through the development of cultural values, knowledge of the content of works of art and understanding of their deep personal meaning. Without this, the full implementation of the artistic interpretation of musical works is impossible, while this is the main goal and main content of musical performance. The standards of higher professional education for instrumental musicians, among the most important professional competencies that a performing musician must master, include the ability to create their own performance plan for a composition and their own interpretation of a musical work, based on the corresponding repertoire choice [26].

Features of the performing interpretation of a musical work are deeply and thoroughly investigated in the works of performing musicians. Scientists note that two full-fledged subjects are involved in this process - the composer (the author of the text) and the performer-interpreter, who, in addition to interpreting the

musical text and understanding the artistic meaning contained in it, provides the musical work with a real "sound life" and transmission of its content to listeners [21, 24]. The performance interpretation integrates the composer's intention, personal creative experience and artistic preferences of the performer, as well as the aesthetic trends of his contemporary era. The ability to carry out an artistic interpretation of music is considered the most important indicator of professional skill and a factor in the formation of the musical consciousness of the performer.

The complex of skills necessary for performing instrumentalist musicians to carry out artistic interpretation includes hermeneutic ones (the ability to find the semantic units of a musical text and give their meaningful interpretation), creative (the ability to comprehend the musical content and build own artistic concept of a work), performing (the ability to find the necessary performing means and to practically embody the artistic concept), and reflexive (the ability to control the performing process and evaluate the credibility of the implementation of the artistic concept).

However, the formation and development of this complex of skills is possible only under the condition of an appropriate competent integrative repertoire policy. One of the important, fundamental factors that contributes to the formation of the artistic taste of an instrumental musician or members of a musical group is namely the repertoire, which includes a wide range of musical and stylistic trends of various eras, genres, musical forms. Through music, the individual musicians or members of the group get acquainted with the best examples of folk musical creativity, sacred music, learn to understand and perform the works of classical composers and contemporaries. In order to most correctly determine the level of artistic taste of a member of musical creative team and the degree of his interest in music lessons, the leader of the team must have a specific idea of the "mechanics" of the emergence and development of musical interests in a person, which leads him to the practical study of musical art. Education of the artistic taste of a musician is a multifaceted and laborious process. One of the components of this process is the upbringing of the perception and reproduction of the work through awareness of the nature of the music.

The question of what to play and include in the repertoire is the main and determining one in the activity of any musician or creative team. The formation of the worldview of performers, the expansion of their life experience occur through the comprehension of the repertoire, therefore, the high artistry and spirituality of a work intended for performance is the first and fundamental principle in choosing a repertoire. In this context, consideration of the repertory policy as the basis for the development of the performing skills of an instrumental musician is of particular importance.

2 Materials and Methods

The methodological basis of the study was constituted of the provisions of the musical performance theory on the integrative nature of performance interpretation. The study implied the research, generalization, and analysis of scientific literature on the problem and topic of research, comparison, systematization, synthesis of theoretical positions, views, assessments. Elements of the conceptual historical analysis of scientific and literary data in the field of music theory and musical (in particular, orchestral and ensemble) performance, musical psychology are applied.

3 Results and Discussion

Instrumental music is a phenomenon of an aesthetic order and has a creative, active character. Man has created material and spiritual values in musical art and contributes to their reproduction, preservation, regulation, development and transmission of specific information. Such information in musical activity is transmitted using the musical language,

various ways of reading it. In the process of creating a work by a composer, the idea and content of the work are transformed into graphic signs - notes, claviars, scores, designations of tempos, strokes, agogics, etc. In the process of performing a work, the work is communicated to the listener, people comprehend and perceive this information, and all this depends on the richness of associative thinking, musical experience, etc. This process contributes to the fact that the information received can become the basis for the creation of new information. In such a process, music acts as information that conveys the experience of accumulated knowledge between different eras, generations of people. Music and its language is a means of communication and transmission of information in a cultural society, modeling the phenomena of life, inner experiences. It expresses the whole rich world of human experiences, feelings, various kinds of emotions and conveys all this with the help of a complex system of signs and symbols. In addition to the sound and notation of notes, there are also formal aspects of language in music - these are the expressions of syntax, the form and texture of the work.

However, music recorded with notes is, in fact, conditional, and only the consciousness of a person, his intellectual thinking endows it with meaning. It is a world of symbols, the meaning of which is to convey information that consists of sounds, rhythms, tempos, modes, melody, and harmony.

Repertoire policy is directly related to the skill of the performer, since being an intermediary between the composer and the listener, first of all, the musician must embody the author's intention. At the same time, the performer simultaneously rethinks and interprets the musical composition, and continues to develop the dramaturgy of the work himself. In other words, by reproducing the author's content in accordance with his subjective worldview and individual experience, he thereby "finishes" what the author has not said, explains the important points of the plot hidden from the naked eye. As a result, in each reproduction of the composition, a performance content arises, which is new every time [5, 17].

The repertoire brings up the artistic taste of musicians, expands their general educational and cultural range. Only a properly selected repertoire, both artistically and technically, contributes to the creative growth of a musician and the improvement of his performing skills. The repertoire must be ideologically meaningful and artistically valuable, diverse in content.

To a large extent, creativity is associated with imagination, which contributes to the creative liberation (freedom of thought) of a person, for creating an alternative aesthetic reality that elevates him above empirical being, being-in-the-world, thanks to which a person ceases to be a "one-dimensional" being. The ability of music to such an elevation is primarily associated with its high standards.

Creativity needs a supportive environment that provides a set of incentives - social, cultural, economic. Addressing the issue of the aesthetic environment, Hsueh et al. emphasize that "to create an environment means to act, create, seek, demand, perceive, calling for help own aesthetic taste" [13]. Nowak and Whelan introduce the concept of a creative developmental environment as an environment that has a set of conditions under the influence of which each of the components of the creativity structure is formed [19].

Hence, it is necessary to shape favorable conditions for the development of human creative abilities, educate the audience, prepare it for the perception of creative works. On the one hand, a creative product (a piece of music) affects a creative personality (a musician), and on the other hand, being involved in a creative environment, a person discovers his own creative abilities in perception and creative activity.

Being involved in the creative environment of artistic (including musical) culture, in musical and pedagogical activities, a person also discovers his own creative abilities in perception, in creative and musical performance activities. A creative environment is necessary for the development and manifestation of a person's

creative abilities. This environment, in turn, is created by an appropriately selected repertoire.

Chamber instrumental music has always been a 'subtle matter' that sensitively responds to all the phenomena of its contemporary era: revolutions (social and cultural), global socio-political events, scientific and technological progress, the emergence of new trends and directions in various fields of art. According to the right opinion of musicologists, namely in chamber ensemble music the dominant emotional moods of the time are found [4, 5]. The 20th century, as well as the 21st century, which began more than two decades ago, not only did not become an exception, but, on the contrary, appeared to be another important link in the development of the art of chamber ensemble performance. As L. Raaben (cited in Deliege and Paddison) notes in his work devoted to chamber instrumental music of the first half of the 20th century, the development of music in the 20th century is characterized by a noticeable increase in the importance and proportion of chamber instrumental genres. The reasons for this process are multiple and different in terms of ideological and aesthetic prerequisites. The chamber genres responded to the contradictory and changeable elements of the musical art of the 20th century with sensitivity to the slightest spiritual movements, the most subtle emotional states, as well as the ability to display philosophical and aesthetic categories and the ever-increasing tendencies of intellectualism and psychologism [7].

Indeed, namely the genre field of instrumental music in the 20th and 21st centuries appears before its researchers as a kind of marker of the psychological state of both modern society as a whole and its various areas. Gradually losing its excessive decorativeness, to a certain extent characteristic of the genre in individual musical and historical periods (for example, Italian Baroque), moving away from the world of a romantic character, with its concentration not on deep psychologism, but on external manifestations of the movements of the soul, chamber-instrumental performance thus, to a large extent, left itself extensive opportunities for including more subtle, deeper aspects of philosophy and psychology, greater detail, and, as a result, achieving an intra-genre diversity that was previously unthinkable.

Representing an extremely complex, multi-level phenomenon, the musical art of the 20th century appeared as "phenomenal in the "revolutionary" nature of its stylistic evolution, presented unprecedented opportunities for endless renewal of the means of music. <...> There is a process of rapid evolution of musical thinking" [7]. In fact, the genre field of chamber instrumental music has come to the fore for composer and performing interests, and, thanks to such specific features of the genre as variability, intra-genre diversity, a wide range of possibilities in terms of statements and expression of composer and performing ideas - from deeply intimate and introverted to, practically, poster-manifesto - by the era of the 21st century, has formed its own, special niche in the cultural and concert life of society, along with the genre of symphony, instrumental concert, vocal performance.

In particular, the guitar timbre is used with special skill in the music of composers who have excellent skills of playing this instrument. In their work, one can find the most daring experiments with sound. There is a whole complex of sound and color means. Among them, there are such as the "clatter" of strings; finger tapping on the body of the guitar; "clacking" with a string without an exact pitch, "plucking" the strings with the fingers of the left hand above the fretboard, nail glissando with the right hand, creating the effect of the vibrating sound of an Indian sitar, hit with a fingernail on the stand, tapping with the nails of the fingers of the right hand on the side of the guitar (imitation of the sound of horse hooves), and many others. The transformation of sound in guitar music is an extremely interesting phenomenon, uniting a whole body of compositions for classical guitar solo and as part of an instrumental ensemble. The use of timbre colors in these works is determined by the degree of the composer's skill, his imagination, the peculiarities

of his style, musical language and his ideas about the capabilities of the instrument. The use of unconventional sound production is such a striking visual technique that it balances on the verge of shocking the audience. Speaking about the formation of the academic status of the guitar, it is important to note that one of its signs is going beyond the national culture. In the 20th century, two trends can be found in this regard: on the one hand, in guitar performance, works with pronounced signs of a particular national tradition are quite in demand; on the other hand, the classical guitar organically fits into the atmosphere of innovation and various kinds of experiments, characteristic of modern musical culture.

Experiments with the piano are also of interest. In particular, an interesting area of Chinese chamber instrumental music is the genre sphere of piano duets with traditional folk instruments, including woodwind and percussion (sheng, guan), bowed (erhu, dahu), plucked and hammer strings (guqin, guzheng, sanxian). In such works, the norms of classical musical forms and the richness of the dynamic and textural possibilities of the piano are synthesized taking into account the Chinese musical vocabulary and the timbre-color features of the national instrumentation. The repertoire of such works in China and beyond becomes the reason for the actualization of the problems of studying such opuses and introducing them into "musicological circulation" [17].

In general, the development of musical culture, in particular instrumental performance, has a clearly indicated trend in the modernization of the musical language, which represents a wide range of different styles in composer creativity. It is associated with the emergence of "polystyle models" - an innovative artistic worldview, new intonations in the music of the second half of the 20th century. The very concept of "modernism" is interpreted in musicology as a definition referring to a number of artistic movements of the 20th century, the common feature of which is "a more or less decisive break with the aesthetic norms and traditions of classical art" [1]. So, for example, meaningful works of the bayan-accordion repertoire of the last decades clearly demonstrate these trends with a bright quality of "renewal of sound", and the ideological and semantic concept of modern bayan compositions accordingly reflect the contextual properties of art of the second half of the 20th century. In particular, a prominent representative of neo-folklorism, a classic of modern accordion music in Ukraine is V. Zubitsky. His work accumulates the very layers of folklore sources of different peoples, different cultures. It represents a wide range of interethnic folklore synthesis, in particular: Slavic themes (Sonata No. 2 "Slavic", "Bulgarian Notebook"), a combination of Ukrainian folklore with Muslim (sonata "Fatum"), Moldavian ("Concerto festive"), Romanian ("Czardas").

Moreover, the arsenal of modern percussion-noise sound production techniques on the trumpet, used in performing practice, is very diverse and depends, first of all, on the imagination of the author of the work. Given the fact that sound can be obtained using a wide variety of devices, striking different parts of the instrument and using its individual parts or foreign objects, the number of sound effects in the modern repertoire is constantly increasing.

A whole galaxy of young composers has appeared, whose area of creative interests includes, not least (rather even in the first place), the genre of instrumental chamber music - a genre that, in essence, was the most fertile ground for creative experimentation. New works appear, written both within the framework of the usual stylistic trends (classicism, romantic style, early avant-garde, impressionism, minimalism), and as works that are completely new, unusual, interesting for their freshness and uniqueness of the individual composer's style (here one can also include works created in the synthetic genres of performance, crossover, and the like) [22].

Currently, in the world of chamber instrumental music, there is a need for a type of ensemble, which in its essence is a universal concert unit: professional, flexible in terms of the perception of modern trends, with a wide range of technical and musical

capabilities that can be interesting to the public. Such a collective is, for example, the American collective Kronos Quartet - a string quartet created in 1973. Kronos Quartet, being a classical string quartet in its composition, professional in the true sense of the word, is just that very universal concert unit: an ensemble well-founded in such seemingly polar genres as academic avant-garde, classics of the 20th century, minimalism, new jazz, conceptual performance, ethnic music, arrangements of rock music. The ensemble's extensive repertoire includes such names as Anton Webern, Alban Berg, Samuel Barber, Philip Glass, Krzysztof Penderecki, Arvo Pärt. Widely known ones are non-academic projects with Astor Piazzolla, musicians from Asia, Africa, European countries, representing the ethnic direction in music [4]. Many composers from different countries and continents write music specifically for this group. Kronos Quartet did the seemingly impossible: while remaining a professional team representing the world of academic music, it successfully integrated the most interesting and fruitful ideas of other musical "worlds" into it, challenging the opinion about the inviolability of the classics, the view that an academic musician cannot be musical "polyglot".

It can be said that, at the current stage, one of the main trends in modern chamber instrumental music is synthesis, in the broadest sense of the word: the synthesis of the arts, the synthesis of various genres and directions of music - that is, synthesis in the sense of dialogue and flexibility of musical space. There is the need for musicians as members of ensembles, open to the search, the dialogue of epochs and cultures, professional creative units. "The interpretation of music as an art form that opens a way for a person to knowledge and self-knowledge, moreover, as a means of restoring the spiritual integrity of a person, allows talking about the need for a significant increase in the status of a musician and at the same time about the responsibility that falls on his shoulders. It is he who is called upon, with the help of musical art, to show his listeners, his students that each of them has a special historical memory, the activation of which makes it possible to penetrate through time and space, allows living in a multi-layered and multi-dimensional world filled with spiritual energy accumulated by mankind for millennia of tireless work on the "cultivation of the soul" (Cicero). The fulfillment of such an important and responsible mission is possible only if the musician strives for the constant expansion of his professional and spiritual space, for a value understanding and evaluation of all phenomena characteristic of the current stage of development of musical culture, for a socio-philosophical analysis of music as a global system, tirelessly carrying out the process of self-development in the space of planetary culture" [8].

Namely the formation of universal musicians-instrumentalists, capable of building an intercultural, inter-epochal dialogue, is one of the tasks of musical modernity. And namely in the synthesis of the achievements of chamber instrumental music of past eras and modern trends, the widest possibilities for the further development of the genre lie. All this, of course, requires the deepest reflection and research, including in the plane of modern repertoire policy.

The current state of affairs in the repertoire palette is characterized by the dominance of stylistic eclecticism, which very organically correlates with the general atmosphere of the postmodern cultural era we are experiencing. The special signs of the latter are succinctly, figuratively, and precisely defined by the Eastern European literary critics: postmodern art, "is devoid of the traditional "Self" - its "Self" is plural, impersonal, indefinite, unstable, reveals itself through the combination of citation; it loves the state of creative chaos; it combines the incompatible, elitist and egalitarian at the same time; it reaches for the marginal, loves to wander "around the edges"; it blurs the line between independent spheres of spiritual culture, and always finds a way to escape from any form of totality; it prefers the production of desire, pleasure, play to all types of production" [6].

Throughout the 20th century, a gradual emancipation of rhythm and timbre thinking can be traced in chamber-ensemble

creativity. For the first time, this trend was most clearly represented in such works as: "Ionization" by E. Varese for 41 percussion instruments and two sirens (1931), where along with traditional percussion instruments, "exotic" instruments are included; "*Sonata for two pianos and percussion instruments*" by B. Bartok, where two percussionists play 12 different instruments (1937). This was continued in such a significant work for all modern music as "*The Hammer without a Master*" by P. Boulez (1954), written as a cycle in 9 parts for contralto, alto flute, xylorimba, vibraphone, percussion instruments, guitar and viola in their various combinations. The improvement of the rhythmic and timbre qualities of chamber music led to the birth of separate ensembles of percussion instruments specially dedicated to the performance of such music, and later, in the second half of the 20th century, - to the formation of permanent ensembles, among which the most famous are Les Percussions de Strasbourg (1962).

In the first half of the 20th century, new genres of chamber ensemble music arose, which later received comprehensive development: "chamber concerto" (A. Berg "Chamber Concerto" for piano, violin and 13 wind instruments (1923-1925)); "chamber symphony" (Schoenberg "Chamber symphony" for 10 wind instruments and a bow quintet (1906), A. Casella' "Symphony" for clarinet, trumpet and piano (1932)); "music for ..." (B. Bartok "Music for strings, percussion and celesta" (1936)). This historical period was also marked by the emergence of so-called "hybrid genres" that combine ensemble playing, for example, with voice (A. Schoenberg' "Lunar Pierrot" (1912)).

Thus, the main trends in chamber ensemble music of the present time turned out to be prepared already in the first half of the last century. During the 20th century, the great fruitfulness of the creative ideas of the avant-garde era was fully confirmed by musical practice. From the category of "experimental laboratory", chamber ensemble art has grown into an interesting field of activity of the best composers and performers. In the new historical conditions, with the development of comprehensive cultural relationships between different countries and continents, ensemble music-making has gained extraordinary popularity and reached a new level of development.

One of the most interesting trends in modern chamber ensemble music is the revival of the principles of medieval music-making, based on the dynamic position of the musicians in the concert space. Performers today acquire the opportunity to be in different places on the stage, to move along it, to carry out any actions comparable to acting in the theater.

It is interesting to trace the variety of instrumentation of modern ensembles. It is considered typical that the ensemble includes ethnic instruments (koto, shakuhachi flute, temir-komuz, and others), ancient European instruments (harpsichord, recorder, zine, etc.), new instruments (vibraphone, bass guitar, synthesizer), which bring a fresh flavor, timbre expression, form a new intonation fund and a special kind of semantic shades. Each such ensemble, in its essence, is a "super-instrument" with its own unique "voice" [4, 18, 21].

In the new century, there is a radical rethinking of the tasks facing the art of music, completely new meanings appear, musical art' connection with the sciences - technical and humanitarian - is being strengthened. Something new is happening in the musical world that is capable of forever changing its appearance - something very similar in its effect and meaning to Wagner's operatic reform, Carlo Goldoni's theatrical reform. The legacy of the era of romanticism - the era, of course, the most important for musical art - not only enriched the sphere of musical art with innovations introduced into it in the field of harmony, metro-rhythm, the rapid development, for example, of the symphony genre, but also burdened it with a significant number of "stamps-masks" - no doubt, bright, but leaving no room for moving forward, into modern times [8, 9].

Undoubtedly satisfying all the requirements for free experimentation in the search for new meanings and means (instrumental principle, the potential for synthesis inherent in it, the natural dialogism of the musical fabric, its flexibility), this particular genre was the obvious choice of modern composers. Perhaps the very word that, with all the variety of trends that emerged back at the turn of the 19th and 20th centuries, would most accurately determine the main line of development, the path along which the musical art of modern times went, was the word "experiment".

The extreme intra-genre diversity and flexibility, variability in terms of the qualitative and quantitative composition of musical instruments, combinations of timbres, forms, and inflexibility - all this made this genre breathing, mobile, laid in it a huge potential for the development of new music. The composers' experimental search for timbre combinations in chamber music led to the formation of free and bold forms, which became the norm at the end of the 20th century. Since the 1960s, the composers' work has been quantitatively dominated by chamber works created for a wide variety of chamber-instrumental ensembles. Often these are traditional ensembles in which composers use non-standard chamber-instrumental crossovers.

Today, a musician who wants to gain fame, not limited to a narrow circle of professionals, needs to find an original creative concept and a bright artistic concept that can act as the dominant points of the author's "advertising campaign". Initially, it is necessary to find out what may be of interest to the 'average' consumer of contemporary art, given the acceptable degree of marginality and elitism, and at the same time taking into account the social problems that concern society in general and the thinking individual in particular. This complex task today finds its solution in musical neoconceptualism.

The social phenomena of network art and contemporary art in the information field of the global network of Internet are reflected in the methods of the advertising campaign of neoconceptualism [14]. The younger generation of composers and performers not only actively uses media technologies, but also proclaims a new era of conceptual art, where the idea is primary in relation to the performance. "The dominant points of the advertising campaign of neo-conceptualism are, firstly, the use of the Internet as the main platform for self-presentation, and secondly, the coverage of certain socio-political and economic problems through the mediation of a bright conceptual idea that can turn an ordinary life situation into an object of artistic creativity and aesthetic pleasure from the originality of the concept" [2, 5, 25, 26].

As an example of musical neoconceptualism of the 21st century, let us call the work of the German composer Johannes Kreidler, who brilliantly conducted a self-advertising campaign and achieved high results in promoting artistic products, including that which received financial expression. Creativity, proving the legitimacy of the existence of conceptualism in the new music of the 21st century, is presented at leading international festivals: in Darmstadt, Donaueschingen and Gaudeamus Music Week. Kreidler conducts his creative searches both in practical and theoretical ways. His art is borderline: on the one hand, he turns to sound art and works in the field of "Compression Sound Art" (extremely compressed sound art), on the other hand, he is the author of many diverse conceptual compositions. Using a sound archive, he "compresses" collections of all Beatles songs or all Beethoven symphonies to one second, or even to one fraction of a second. In the play "Product Placement", he compresses 70,200 musical samples to 33 seconds. In 2008, Kreidler transformed stock charts into a melodic line, arguing that this is how one can "hear the song of the crisis" [10]. Stock charts and diagrams in his interpretation resemble "notation without music", which he is trying to voice. Japanese candlesticks, tic-tac-toe, Elliot waves, which visualize the course of trading on the stock exchange, evoke analogies with graphic scores. Price fluctuations characterize the course of trading, and fluctuations per unit time characterize the height of the sounds. Pauses characterize the process of refusal to sell/buy, representing an

element of tactical silence on the exchange. From the point of view of neoconceptualism, money, like music, is only a system of signs. "A note is a security and a sign of notation at the same time". Kreidler not only assigned certain notes to the fluctuating indices, but also used data from large companies for his work. Thanks to his creative processing, one can now hear the sound with which Lehman Brothers, General Motors, and Bank of America fell in 2009 [10]. This original concept became the musical accompaniment to the economic cataclysms and gained popularity on the YouTube service.

The original idea for the composer is much higher than the "originality" of the music itself. Today's time clearly demonstrates the situation of "Music in Music", when the time comes for original ideas to create all kinds of bricolages from "finished" material. Postmodern, according to J. Kreidler, is a diagnosis of modernity, according to which all kinds of Remixes are produced today. Gottfried Benn, who declared that "the art of the future will be collage," was much more far-sighted than many thought, since the documentary archive of the 21st century will be nothing more than a sound archive of the Internet [27].

The so-called *in-situ* approach in music is gaining increasingly more popularity. For example, "Echo Piece (2009)" (see Figure 1 below), by Michael Parsons, as Fernqvist notes, "is an in situ work: it is an environmental sound work in which the performers explore the acoustic properties of a place by moving and playing. The audience and instrumentalists move through the location at certain intervals, playing short notes to create and listen to the nature of the echo in different positions. These echoes will be specific to this space and could not be produced elsewhere" [11].



Figure 1. Michael Parsons, *Echo Piece (2009)* at Canary Wharf [11]

Among the latest innovations in the repertoire of instrumental music, one should also note the "landscape approach", also described in the work of Fernqvist. This approach "explores landscape as a form of score and as a site for creative musical inspiration, examining what happens in the interaction between performer and site in terms of music and sounds ... One may then assume that performing sounds in the landscape will change the embodied experience of the landscape, for both the performer and the audience ... This is exemplified by Carrlands by Mike Pearson and John Hardy, a series of three sound compositions, inspired by a landscape in North Lincolnshire, incorporating music, effects and the spoken word" [11].

The concept of landscape music and interaction with the audience in it (interactive listening) is presented on the Figure 2 below). The instrumentalist musician, working with such repertoire, must be able to engage the audience in the process of playing music – paying and listening in this case become an integrative, inseparable whole.



Figure 2. Landscape music and interactive listening [6].

The inclusion of such experimental "integrative" music in the repertoire of instrumental musicians, accordingly, requires the improvement of performing skills, the acquisition of interdisciplinarity skills in art, the ability to work in "synergy" with the audience, which implies, in particular, knowledge/skills from the field of psychology, anthropology, nature studies. Interdisciplinarity is increasingly becoming the basis of the "competitiveness" of the modern instrumental musician.

Also, it should be noted that the electroacoustic composer of the 21st century is quite competent in key areas of musical technology and quite rightly can consider his computer as an ordinary operational tool that he needs to solve a creative problem, but that does not determine the artistic value of future work [19, 20]. It is no coincidence that over the past ten years the so-called electronics and interactive music have been actively developing, allowing interaction with the material 'here and now', real performing interpretation. Helmut Lachenmann back in 1980 argued that "tonality was not something detrimental, but it had to be overcome ... and we must find a new antenna in ourselves, we must listen more, and this is an amazing feeling of a pioneer" [16]. Lachenmann called his creative output "instrumental concrete music". By this name, the composer meant that the musical language, which covers the entire sound world, becomes available in instrumental music through unconventional methods of using instruments. All of this is music in which the sound events are chosen and arranged so that the way they are extracted from the instruments is at least as important as the final sound result. In other words, we can assume that it is not the work that becomes the goal of the composer, but itself the process of its creation and the disclosure of the sound potential of the instrument or the object with which it interacts.

The operational and professional tasks of composing and performing have been replaced by more ambitious tasks of transforming artistic culture as a whole. Modern instrumental musicians are more willing to participate in projects that in their content involve the synthesis of the arts, the equal interaction of music and plastic arts, performance art, artistic action, video art, etc. Accordingly, the repertoire policy is changing, in an effort to attract the "spoiled" modern audience. The modern consumer society, oriented to some extent to the entertainment industry, wants to see an interesting and bright idea and concept in new music, in which some kind of "entertaining story" with political, financial, and social overtones is embedded [12]. The idea, which in this case is not only a commodity, but also the main means of an advertising campaign, is focused on political, social, and partly on artistic problems. Musical neoconceptualism, illustrated above with Kreidler's work, is the most striking example of how an idea acts as a commodity. All this has an impact on the transformation of the concept of mastery of a musician-instrumentalist - now it includes "engineering" skills in the field of computer music technologies, acting skills, soft

skills, the ability to integrate different styles and genres of music and drama in the process of performance, etc.

Thus, the repertoire of modern instrumental musicians, and, accordingly, its influence on their performing skills, is directly dependent on the social and economic trends of the era, and, moreover, instrumental music has become an integral part of the social landscape of post-industrialism, in the context of the increasing democratization of art.

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PSYCHOLOGICAL ASPECTS OF THE LANDSCAPE OF MODERN ORGANIZATIONAL AND PEDAGOGICAL CONDITIONS OF TRAINING OF SPECIALISTS THROUGH THE INTEGRATION OF EDUCATION, SCIENCE AND PRODUCTION IN UKRAINE

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Abstract: The relevance of the scientific topic is based on solving the problems of the methodology of introduction of modern organizational and pedagogical conditions of training of specialists through the integration of education, science, and production, which involves the implementation of the educational process on the basis of mutual assistance. In the process of experimental research at the ascertaining stage among the future specialists, problems were revealed, which are in the unwillingness of students to study in the dual form of education. Methodical tools were developed to increase the readiness of future professionals for professional activity through the integration of education, science, and production, namely: solution and discussion of different problematic situations, use of business games of different topics, creation of presentations for work, use of innovative techniques (methodology of formation of motivation to implementation of professional activity; methodology of formation of professional and pedagogical knowledge and skills; methodology of formation of professionally important qualities), aimed at shaping of all structural components of the implementation of dual education, project technologies, training technologies, coaching-technologies, case technologies, information and communication technologies. After conducting the experimental study, promising directions of increasing the level of readiness of future specialists for professional activity through the integration of education, science, and production were formed. The practical value of the work consists in the development of the methodology for organization and implementation of the process of integration of education, science, and production in higher education institutions of Ukraine.

Keywords: organizational and pedagogical conditions; training of specialists; integration of education, science and production; dual education; the readiness of future specialists; readiness components.

1 Introduction

The intensification of structural changes observed in numerous institutions of higher education of Ukraine increases the demand for new level experts capable of qualitative realization of production tasks. Changing trends in the labor market and strengthening the requirements of stakeholders to specialists require the intensification of transformation processes and improvement of the educational environment [13]. To date, the most effective form of educational process is dual education, through which an increase is observed in the practical side of the educational process, the quality of educational services, integration of production, the labor market, and institutions of higher education [1; 6; 20].

Science, which provides the generation of new ideas, introduction of technical and technological developments in education, acquires the driving force of the state, if it is in continuous interaction with the production process, is transformed into a result.

Reforming Ukrainian higher education, in particular, pedagogical education, currently is carried out by updating state standards, improving the content of education through the modernization of existing educational programs, introduction of flexible forms of vocational training organization in order to overcome the gap between theory and practice, education and production [10, 11]. Such a modern form of education is namely dual education, which is intended to bring professional education to the requirements of the labor market, to create opportunities for graduates to obtain key and professional competences [8, 14; 16].

Transformation processes in society have led to increased psychological aspect of studying the problem of integration of education, science, and production. The definition of psychological aspects of the landscape of modern organizational and pedagogical conditions of training of specialists is based on the results of diagnosing the level of the future specialist's development, which includes evaluation of his motivation, the level of development of emotional intelligence, cognitive abilities, the level of formation of skills, ability to self-learning and reflection. Organizational and pedagogical conditions of training of specialists are considered in the system of interaction "man-profession". Determination of the formation of readiness of future specialists for the implementation of professional activity through the integration of education, science, and production in this system is based on the study of mutual formation of components of readiness [4; 24].

Adherence to the balance between the psychological component of the specialist's readiness to integrate education and science into production and the theoretical and practical component is achieved through the rational organization of the educational process, when the theory is studied in an educational organization, and practical skills are formed directly in production.

Therefore, the problem of studying the psychological aspects of the landscape of organizational and pedagogical conditions of specialists training with the use of elements of a dual system of learning, capable of working effectively and satisfying production requests, is urgent.

The dual education system has gained worldwide recognition and is the most common form of training in demanded specialists in the labor market in Ukraine, which combines theoretical training in a higher education institution with industrial training at the enterprise. That is why the education system requires serious reform based on a comprehensive approach and integration of education, science, and production.

2 Materials and Methods

Today, many works of both Ukrainian domestic and foreign scientists are devoted to the problems of integration of education, science, and production: N. V. Abashkina, S. M. Amelina, U. Mill, in the works of which the essence, formation, and problems of dual learning in Germany are revealed; O. Begma, L. Green, Yu. Panfilov, S. Karlyuk, L. Yu. Krymchak, N. V. Kulalaeva, K. V. Yakovenko, and others propose to improve the interaction of education, science, and production by creation of educational and scientific complexes of associative type with the involvement of enterprises and institutions of Ukraine [22; 25].

The Ukrainian education system is characterized by a borrowing of experience in Germany and other countries that introduce dual-form training.

There are already some legislative bases in this direction that require development and real implementation. According to the Law of Ukraine "On Education", "Dual Education is a way of obtaining education, which involves the combination of training of persons in educational institutions (or in other subjects of educational activity) with training at workplaces at enterprises, institutions and organizations to acquire a certain qualification based on a trilateral contract" [27].

In the professional training of future specialists, elements of dual form of education were introduced by order of the Ministry of Education and Science of Ukraine of June 23, 2017 "On the introduction of elements of dual form of training in the professional training of qualified workers". The order defines the list of institutions of vocational (or vocational-technical)

education for implementation during 2017-2020 of the elements of dual form of training in certain working professions, as well as approves the road map of the introduction of elements of dual form of training in the professional training of qualified workers [18].

The concept of training of specialists in the dual form of education was approved by the order of the Cabinet of Ministers of September 19, 2018 No. 660-p, which expands the boundaries of dual form of education in the preparation of applicants for higher, professional higher, and professional (vocational-technical) education [17].

For the implementation of this concept of the CMU, a plan of measures for the implementation of the concept of training of specialists in the dual form of education was approved, obliging the Ministry of Education and Science, the Ministry of Social Policy, the Ministry of Economic Development, the Joint representative body of the party to the employers at the national level (with consent), a Joint representative body of representative all-Ukrainian associations of trade unions at the national level (with the consent) to develop a Provision on the dual form of obtaining vocational (vocational-technical) education, Provisions on the dual form of obtaining higher education (including professional one), standard contracts on dual form of obtaining vocational (vocational-technical) education, professional higher education, higher education.

At the same time, the Plan of measures provides for amendments to the normative legal acts in the field of education and labor with the aim to take into account the peculiarities of the introduction of a dual form of education [16].

The Ministry of Education and Science of Ukraine, within the framework of the plan of measures for the implementation of the Concept of Training of Specialists by Dual Form of Education, proposed a draft of Provision on the dual form of higher and professional higher education for public discussion.

The dual form of education in institutions of higher and professional higher education, in accordance with the Provision, implies education by combining training of persons in educational institutions with training at workplaces at enterprises, institutions and organizations for acquisition of certain qualifications on the basis of the contract. The responsibility for the implementation of the educational program rests with the educational institution in full. The provision defines the purpose of implementation and the main tasks of the dual form of education, defines dual learning, appropriate rights and responsibilities.

The Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine on Improving Educational Activities in Higher Education" introduced a dual form of obtaining education in the higher education institutions, defining it as a way of obtaining education by full-time applicants, which provides training at the workplace at enterprises, institutions and organizations for acquisition of a certain qualification with a volume of 25% to 60% of the total volume of the educational program on the basis of the contract [21].

The real steps towards the obtaining education within dual-form was the introduction of a pilot project in the institutions of higher (including professional) education in the training of specialists by dual form of education, which approved the list of institutions of vocational higher education and higher education and specialties for the implementation during 2019-2023 of the pilot project [20].

Successful implementation of dual education requires the synergy of efforts of educational institutions, employers, and students. The primary task for educational institutions is to find partner employers. At the same time, it is equally important not only to establish a partnership with employers, but also to determine the criteria that the employer must meet for the organization of training in dual form and to develop the mechanisms of economic interest in these processes. The

interaction of business and government should be built on the principles of public-private partnership. The current legislation governing the relations between the state (state partner) and legal entities (private partners) pays enough attention to such cooperation in the field of education.

However, the Ministry of Education and Science of Ukraine combines efforts with enterprises and organizations in the direction of systematic, constructive, and mutually beneficial cooperation to ensure high quality of professional training, attracting additional resources for the development of vocational education and its orientation on modern technical and technological conditions.

The main directions of such cooperation are as follows:

- Preparation of proposals for reforming the higher education system and creation of professional and educational standards;
- Providing advisory assistance on issues of common interest;
- Participation of future specialists in joint events: competitions, exhibitions, conferences, round tables, etc.;
- Development of mechanisms for providing graduates of professional (vocational-technical) educational institutions and higher education institutions with workplaces at enterprises;
- Development of proposals for compatible provision of professional qualifications to graduates by employers and educational institutions;
- Consolidation of enterprises on institutions of vocational (vocational-technical) education and higher education institutions for providing chefs;
- Ensuring practical training of future specialists and internships of teachers of vocational training and masters of industrial training at basic enterprises;
- Introduction of payment by enterprises and sectoral organizations of registered scholarships to the best students;
- Providing enterprises and organizations with assistance in the maintenance and development of the material and technical base of educational institutions;
- Introduction of material and moral stimulation of teachers of educational institutions by enterprises and organizations;
- Mutual dissemination of information on issues related to the development of vocational education and training of competitive personnel for the labor market [2; 19; 26].

On the basis of the above data, the methodology of forming the readiness of future specialists for the implementation of professional activity through the integration of education, science, and production involved the use of effective methods that would contribute to the improvement of dual education on the basis of the introduction of modern organizational and pedagogical conditions of training of future specialists. Such methods included the use of innovative technologies in the course of students' technological internship at the enterprise, involvement of future specialists in research work with further implementation, expert evaluation, questionnaires, testing, conversation, observation, surveys at the stage of ascertaining experiment to determine the initial level of readiness of future specialists for professional activity through integration of education, science, and production [7, 9; 21].

The basics of the methodological approach of experimental research are the analysis of literary sources for comparing different views on the problem under study, systematization and generalization of theoretical data, comparative analysis, as well as empirical methods (questionnaire, testing, conversation, observation, surveys, generalization of pedagogical experience, creation and solution of problematic situations). Diagnostic (questionnaire analysis) method was also applied, as well as pedagogical observation and pedagogical experiment (ascertaining, molding, control).

The experimental study was conducted at the Hlukhiv National Pedagogical University named after Olexander Dovzhenko. In

order to ensure the representativeness and accuracy of the sample, the peculiarities of the formation of control and experimental groups, age and gender are determined. The formation of the control and research massif was carried out by pairwise selection. The condition was taken into account that at the end of the selection, the number of the experimental group meets the requirements of representativeness. The sample consisted of 120 students. The control group was 58 respondents, while the experimental group included 62 respondents, in particular, 68 women and 52 men.

At the ascertaining stage, research and analysis of the literary base on the problem of research and comparison of scientists' views on the problem under study, systematization, classification and generalization of theoretical data, comparative analysis; modeling and generalization of the methodology of training of future specialists in the conditions of dual education, components of readiness and organization and pedagogical conditions of readiness of future specialists for the implementation of professional activity through the integration of education, science and production was carried out. There was checking the levels of readiness of future specialists for dual form of study by components: motivational-emotional, cognitive, activity, and reflexive.

Modern psychological aspects of the problem and conditions of readiness of future specialists for the implementation of professional activity through the integration of education, science and production, which can be effectively and qualitatively resolved through the practical use of the author's methodology; a survey of undergraduates who went to practice for production was conducted, the necessary conclusions were made.

At the formative stage of the experiment, an analytical study of the effectiveness of certain components and organizational and pedagogical conditions of readiness of future specialists for the implementation of professional activity through the integration of education, science, and production was conducted: enriching the content of professional activity, professional responsibility of the undergraduate in situations as close as possible to the realities of production, the use of contextual teaching methods in educational and professional activity, professional responsibility of the undergraduate in situations as close as possible to the realities of production, mastering pedagogical principles of development of emotional intelligence in future specialists; Outlines were conducted, diagnostic conversations, questionnaires, testing were offered to participants; the data were processed using the methods of mathematical statistics: processing the final indicators of the level of readiness of future specialists for professional activity through the integration of education, science, and production.

3 Results and Discussion

Dual training is believed to be one of the means of effective economic development of Ukraine, because it provides citizens with employment and the economy - with necessary experts.

On the basis of analysis of scientific works [15; 21; 24; 26], it was determined that the "dual form of education" is a way of obtaining education, which involves the combination of education of persons in educational institutions with training at workplaces at enterprises, institutions and organizations for acquisition of a certain qualification, usually on the basis of the implementation of Dual Education Agreement (contract).

Every profession that requires special practical training, is provided with fixed-term training programs and requirements for the result: skills and knowledge. An important advantage of dual learning is that the enterprise has the opportunity to select prospective specialists, and this also enhances the motivation of applicants.

German vocational training in the form of dual training is organized with the prospect of the future, taking into account the development of technologies that ensure work automation. The

emphasis is made on the training of qualified, responsible, independent, initiative employees who understand the purpose and methods of the company and are able to show determination in the event of problems or if possible to improve the production process [5; 9; 19; 27].

Currently, dual learning is gaining popularity around the world (Austria, Hungary, China) and covers professions in various fields of activity. Collaboration with Germany on the introduction of dual learning is carried out in more than 100 countries.

The main problem of higher education of Ukraine is the need to urgently resolve the issues of psychological aspects of formation of future specialists' readiness for the implementation of professional activity through the integration of education, science, and production, justification and implementation of organizational and pedagogical conditions of such training [12]. The problems of integration of education, science, and production are in the lack of qualification of master's graduates, poor quality of education and the level of introduction of scientific developments in the conditions of the real production process, inefficient use of budgetary funds [26].

The causes of arising of such a problem are: insufficient formation of professional competences in future specialists needed by stakeholders; low level of practical training of specialists and financing in the development of modern material and technical base of higher education institutions and enterprises; insufficient involvement of specialists with experience of practical work and appropriate qualification in the teaching.

The results of the analysis of the basic approaches of scientists to the definition of the concept of "organizational and pedagogical conditions" make it possible to determine their main characteristics: components of the educational process of training of future specialists; reflect the set of circumstances, factors that have a positive effect on the effectiveness of their preparation; they contain internal and external factors that allow improving the quality of professional training of specialists.

Thus, under the organizational and pedagogical conditions of training of future specialists through the integration of education, science, and production, we understand the circumstances and factors related to the educational activity of future specialists, aimed at improving their preparation for professional activity in the process of training within dual form of education.

Based on the results of the study, the basic organizational and pedagogical conditions that provide effective training of future specialists through the integration of education, science, and production, are defined by us as follows: formation of positive motivation of future specialists for professional activity; improving the content of general and vocational training; use of innovative techniques and technologies in the learning process and organization of technological practice; development and implementation of a complex of educational and methodological support [17].

Let us consider the content of each of the specified conditions in detail.

The first pedagogical condition is the formation of positive motivation of future specialists for pedagogical interaction.

Scientists and researchers focus on the close relationship between the psychological setting, motivation and professional competence of the teacher. Namely teachers with a high level of motivation to confidently take responsibility, make decisions in non-standard situations, persistently go to the goal, belief in the effectiveness of their pedagogical activity and its results. Therefore, the need to form a positive motivation for any professional activity, in general, is one of the important problems of today.

Considering this, the second pedagogical condition is to improve the content of general and vocational training disciplines.

The need to improve the content of training of future specialists through the integration of education, science, and production is based on the strengthening of the role of partnerships between the teacher and students in the educational process, in particular, subject-subject interaction in future professional activity. Since the main characteristic of a specialist is the level of his professional competence, which involves the presence of ability to project the pedagogical process in higher education institutions, the systematicity of which depends on the ability to carry out pedagogical interaction with all subjects of the educational process.

The content of professional training of future specialists is most fully reflected and implemented in the educational documentation, the development of which should be carried out in accordance with methodological approaches and didactic principles that determine the selection of educational information, its structure, content, relationships between elements in the creation of curricula, programs, textbooks. This determines the implementation of new approaches to the content-structural and organizational and didactic foundations of professional training of specialists. Content should be improved in such a way as to promote students' knowledge of the integration of the educational and scientific component into production, methods, techniques and mechanisms of its provision on a subject-subject basis, as well as help the formation of dual education skills and skills. Features of subjects of pedagogical process and organizational and pedagogical conditions. The content should include knowledge of the essence and features of dual education, the principles of its organization, types of dual education and its characteristics; forms of behavior in dual education, as well as types of conflicts during dual education and mechanisms for their resolving.

Improvement of content, in turn, requires reviewing methods and technologies of training of future specialists for professional activity. Thus, the third pedagogical condition is the use of innovative techniques and technologies in the learning process and organization of technological practice (internship).

Since dual education involves cooperation, joint solution of educational and scientific tasks between the head of the educational institution and enterprises and students, making constructive decisions in different pedagogical situations, professional training of the future specialist should be ensured through the formation of creative thinking, ability to establish interaction, quickly navigate pedagogical situations and make a rational decision. The use of innovative techniques (the method of formation of motivation for the implementation of professional activity; the method of formation of professional and pedagogical knowledge and skills; the method of formation of professionally important qualities) aimed at the formation of all structural components of the implementation of dual education facilitates resolving of these tasks [18].

Pedagogical technologies for the training of future specialists through the integration of education, science, and production (projected, training technologies, coaching technology, case technology, information and communication technologies) should contribute to the change in the role of the subjects of educational process, their attraction to cooperation and knowledge gaining activity, give the ability to model pedagogical situations related to future professional activity, thereby developing behavior skills in standard and non-standard situations.

The use of innovative techniques and technologies of training of future specialists through the integration of education, science, and production makes it possible to solve the following tasks: helps to students' solving of interpersonal problems; provides feedback between students and the teacher, thereby contributing to a better understanding of self and others; involves students in the system of social relationships, shapes the ability to respect others; forms a holistic view of future pedagogical activity;

develops practical skills and interaction skills on the basis of cooperation.

Professional training of future specialists becomes more effective if students actively interact with each other and with the teacher during the educational process, jointly solve educational tasks, 'absorb' and develop skills in practice in real production, undergo intensive preparation for everyday professional life.

Thus, the use of innovative techniques and technologies in the educational process helps to involve students in active interaction with each other, to form the ability to work in groups and subgroups, thereby contributing to the formation of a culture of interaction.

In order to enhance the content and increase the effectiveness of the use of innovative techniques and technologies, it is necessary to develop a complex of educational and methodological support, which will help to improve the quality of training of future specialists in the conditions of distance education, will ensure the integrity of their professional training in the unity of goals, content, methods, forms, innovative techniques and technologies. Therefore, the fourth pedagogical condition is the development and implementation of a complex of educational and methodological support.

The complex of educational and methodological support must be 'designed' in accordance with the concept of methodological approaches, didactic principles, which contributes to the selection of educational material and its logical construction, the use of innovative techniques and technologies aimed at the training of future specialists through the integration of education, science, and production.

The complex of educational and methodological support for the training of future specialists through the integration of education, science, and production includes a set of documents, scientific, educational, methodological materials that determine the content of their training, its structure and result and establish the peculiarities of the course of the educational process, taking into account trends of educational development.

To the normative documentation, we include educational and professional programs of preparation of students of specialty 015 "Vocational education" at the first (Bachelor's) and second (Master's) levels of higher education. Regulatory documentation is the basis for the development of other components of a complex of educational and methodological support, in particular educational and methodological complexes in various disciplines.

The educational and methodological documentation of the training of future specialists through the integration of education, science, and production, developed by us during the study, contains: curricula of the disciplines "Fundamentals of experiment", "Methodology of vocational training", "Technological practice"; from these disciplines - notes of lectures and methodological recommendations for the implementation of practical (laboratory, training, seminar) classes, independent work of students, course work; it also includes program and methodological recommendations for technological practices.

Diagnosis tools contain comprehensive control work, examination tickets for the final control, test tasks, a list of questions for oral survey and self-control in the disciplines: "Fundamentals of experiment", "Methodology of vocational training", "Technological practice", etc.

Thus, each of the certain pedagogical conditions is aimed at training future specialists through the integration of education, science, and production. At the same time, each condition taken separately can not fully ensure the efficiency of the educational process, and only their systemic unity allows to successfully carry out professional training of future specialists.

To determine the level of readiness of specialists for the implementation of professional activity through the integration of education, science, and production, components and indicators corresponding to them are identified, which will ensure the formation of organizational and pedagogical conditions which we outlined: a) motivational-emotional - motivation for advanced training in accordance with the requirements of production and psychological readiness to carry out professional activity; focus on team activity; attitude to professional values; b) cognitive - knowledge of job descriptions, norms, orders, rules and values of professional activity; knowledge of the method of writing scientific works, professional knowledge; activity - possession of professional skills and skills necessary in the course of professional activity; 'reflective' implies the ability to self-reflection and self-esteem.

The assessment of the readiness of future specialists for the implementation of professional activity through the integration of education, science, and production was carried out at three levels, namely: high, medium, and low.

Also, during the ascertaining stage of the experiment, a complex of adapted methods of studying the levels of formation of the definition of the definition at different stages of the experiment was adopted.

The determined components of specialists readiness for professional activity through the integration of education, science and production are the basis for the development of the necessary methodological tools with which diagnosis of the specialist' preparedness was carried out. The total sample size was 120 students. The control group consisted of 58 respondents, and the experimental included 62 respondents, including 68 women and 52 men.

The experimental study was conducted at the Hlukhiv National University named after Olexander Dovzhenko among future specialists in order to determine their level of readiness for professional activity through the integration of education, science and production.

The ascertaining stage of the study was intended to verify indicators according to certain criteria of readiness for professional activity through the integration of education, science, and production, namely motivational-emotional, cognitive, activity and reflexive.

In order to determine the level of motivational-emotional component of future specialists, we used the MSCEIT test, which consists of tasks with the correct and incorrect answers, that is most traditional for the diagnosis of intelligence. The test distinguishes four groups of emotional intelligence capabilities with sections of tasks to identify each of them.

The MSCEIT test is adapted by us by including students in the training programs for the development of the following components in them: perception, assessment and expression of emotions; use of emotions to increase the efficiency of thinking and activity; understanding and analysis of emotions; conscious management of emotions for personal growth and improvement of interpersonal relationships.

I. The first component: perception, evaluation and expression of emotions - section A (measurement of perception of persons) and E (dimension of picture perception).

Perception, assessment and expression of emotions or identification of emotions Y in section A will use the Exercise "Demonstration", where future teachers of vocational training are suggested to choose and clearly demonstrate 4 photos of faces of people who need to be assessed by the degree of expression of 5 emotions that are offered to choose a test participant. In total, there are 7 sections: happiness, sadness, fear, anger, disgust, surprise, excitement. The expressiveness of emotions is evaluated on a 5-point scale: from 1 - "least severity" to 5 - "strong severity".

Objectives: to improve understanding of basic principles or theory, to give future professionals the opportunity to draw conclusions from experience, to interest students, to develop critical thinking.

II. The second component: the use of emotions to improve the efficiency of thinking and activity - Sections B (measures the ability to assimilate own current experience, describe feelings for a particular person) and F (measures a person's ability to describe his emotional states) [6; 23].

Checking the level of development of cognitive and activity criterion in teachers was carried out by testing according to the developed methodology, in the content of which a number of statements, that should be disclosed, for example: "Features of psychological work with personalities of different types", "Methods for submitting material to students with the use of digital and innovative technologies", "Technologies and techniques of practical work in the conditions of distance education", "Features of assessment of acquired professional competences of future specialists during dual education", "Dual educational activity and current educational laws, ethical rules and regulations". According to these statements, teachers should give detailed answers and show a level of professional competence on a scale from 0 to 3 points.

The test results show that future experts in general do not have theoretical knowledge and methodological techniques during dual training in real production.

The test of the reflexive component of the readiness of future specialists for the implementation of professional activity through the integration of education, science, and production was carried out by interviewing students in order to evaluate the levels of their ability to reflect and self-assess the results of their own activities.

Results of the ascertainment stage of the experimental study suggest that 67% of respondents see themselves as dual education subjects and believe that it is necessary to work on its improvement, however, 29% of those surveyed are mediocre in the development of dual educational space, while 4% of respondents consider their skills low and not sufficient for teaching by dual training.

The results of the testing of the readiness of future specialists to carry out professional activity through the integration of education, science, and production were depicted in Figure 1.

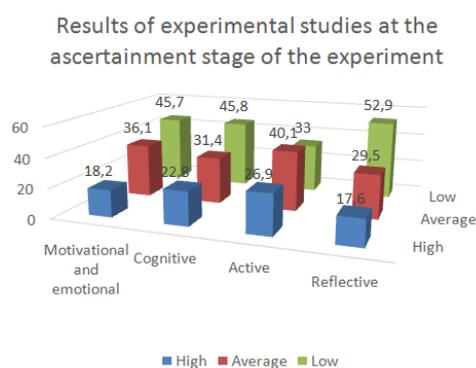


Figure 1. Summary of consolidated data at the ascertainment stage of the experiment

After conducting the ascertaining experiment and processing the results, the next stage of pedagogical research was the formative experiment whose purpose was to experimentally test the methodology of the formation of modern organizational and pedagogical conditions for the training of specialists through the integration of education, science, and production according to the outlined components, namely: motivational-emotional, cognitive, activity, reflective.

To improve the motivational side of the readiness of specialists for the implementation of professional activity through the integration of education, science, and production, the following techniques and methods were used: coaching based on the use of a methodological system, the basis of which is the methods of activation of learning that ensure the formation of professional and socially significant qualities of future specialists. Coaching consists of scientifically grounded integrated programs of interaction of the teacher and students in the educational process (analysis of the problem situation, method of emotional stimulation of learning, method of creating a situation of cognitive dispute, application of the method "brainstorming", educational measures).

"Confuse" exercise was used to check the emotional constituent of this component. Section B according to the method used consists of 5 interesting stories aimed at understanding what emotions contribute to the more effective performance of activities of various kinds. The test participant should determine how useful it will be in this situation to feel a particular emotion. In total, 3 emotions are offered in each question, which are evaluated on a 5-point scale: from 1 – "does not help" to 5 – "helps".

Objectives: use of emotions to focus on priority for thinking things, focusing on important information; the use of bright and accessible emotions as auxiliary means of thinking and memory; the use of emotional mood fluctuations to change the prospect of individuals (from optimistic to pessimistic) and to expand the diversity of possible views on certain events; updating those emotions that contribute to solving certain tasks (for example, a good mood improves the solution of creative problems).

III. The third component - understanding and analysis of emotions - section C (the understanding of emotions over time, as well as understanding how emotions follow one another, change each other was studied) and G (measuring of the ability to distinguish between mixed and complex feelings). In the MEIS version, section C was broken down into 2 separate sections. There was also a section on measuring the relativity of emotions (stories about conflict situations where the subject was asked to imagine the feelings of one and the other side of the conflict).

Participants of the training were offered an exercise "Discussion in pairs". Section C consists of 20 descriptions of different situations in which the characters feel different emotional states, with 6 options for answers in each. Understanding the situational conditionality of emotions involves both a cognitive understanding of the meaning of the situation and the experience of going through similar states. For each question, one has to choose the most suitable answer.

Objectives: ability to mark emotions and their verbalization; understanding the difference between not similar in names, but close in content emotions (e.g., sympathy and love); the ability to interpret the value of changes in emotions, understanding of causal relationships (for example, the occurrence of longing after loss); the ability to understand the complex of feelings, for example: simultaneous love and hatred, or such a mixture of feelings as a reverential fear (which consists of fear and surprise); the ability to recognize unexpected changes in emotions (for example, a change in anger to satisfaction, or a change in anger to embarrassment).

IV. The fourth component is a conscious management of emotions for personal growth and improvement of interpersonal relationships - section D (management of own emotions) and H (management of other people's emotions). The participants were asked to imagine themselves at the place of the heroes of the stories proposed by them and to evaluate options for further actions.

Section D is devoted to the ability to effectively manage own emotions. That is why we have chosen the exercise "Perspective approach". Its purpose is to give students the opportunity to apply critical thinking, deep processing of material, analysis,

synthesis and evaluation. The section offers 5 stories that describe some events. There are 4 options of continuation for each story. The respondent should evaluate every continuation of the story in terms of how effectively such actions can lead to a good mood or its preservation in the main character. The evaluation is carried out on a 5-point scale: from "a" – "very inefficient" to "e" – "very efficient".

Objectives: To develop the ability to remain open to feelings, both pleasant and unpleasant; the ability to consciously pay attention or distract from emotions, depending on the assessment of their informativeness or utility; ability to conscious control of own and other people's emotions (for example, recognition of typicality, influence, understandability of emotions); the ability to manage own and other people's emotions (for example, the ability of lowering negative emotions and increasing pleasant ones without reducing or enhancing the information they can convey).

The results obtained allow giving a constructive assessment of the overall level of emotional intelligence (high, average, and low level) and determining the ways of its development. The points are calculated by means of a key made on the basis of expert estimates.

Improvement of the theoretical and practical line of specialists' readiness to carry out professional activity through the integration of education, science, and production was ensured due to the implementation of cognitive and activity components through the involvement of future specialists in dual form training at the enterprise, the purpose of which was to increase the level of professional competence of future specialists and the formation of the second and third pedagogical conditions.

To diagnose the degree of formation of the activity criterion, teachers were asked to solve pedagogical situations in the conditions of dual education. Students were offered 12 typical pedagogical situations that occur in the educational process of higher education.

To check the reflexive component of the specialists' readiness to carry out professional activity through the integration of education, science, and production, a bank of test tasks was developed for carrying out self-assessment by future specialists. Students need to evaluate in points the level of formation of a particular skill.

According to the results of the formative stage of the experiment, the effectiveness of the developed methodology for the formation of modern organizational and pedagogical conditions of training of specialists through the integration of education, science, and production was carried out, which was made possible through the check of the levels of formation of components.

The results of the diagnosis of components of specialists' readiness for professional activity through the integration of education, science, and production at the formative stage of the experiment are presented in Figure 2.

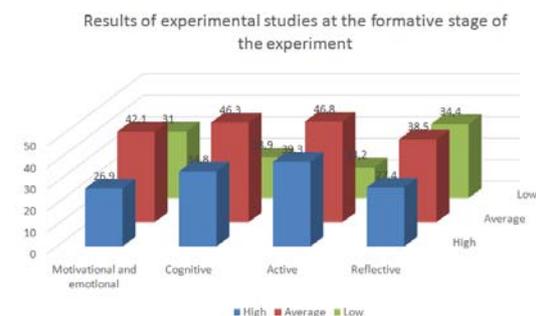


Figure 2. Summary of consolidated data in the formative stage of the experiment

Thus, according to the results of the experimental study, it was found that the advantages of dual learning should include: formation of professional competences in future specialists during training, taking into account the peculiarities of the work of a particular enterprise; graduates of the university will have the opportunity to get a job at enterprises - the bases of practice with which the Glukhiv National Pedagogical University named after Olexander Dovzhenko will conclude contracts; the use of a system of contracts between students and enterprises, which facilitates the training of young professionals under a special curriculum within the continuous educational process; the graduate, in further employment, does not require psychological and professional adaptation, which has a positive effect on the overall performance of the enterprises.

4 Conclusion

In the course of the study, the concepts of “organizational and pedagogical conditions”, “training of specialists”, “readiness of future specialists for the implementation of professional activity through integration of education, science, and production”, “components of readiness” are defined. Perspective directions of implementation of modern organizational and pedagogical conditions of training of future specialists through the integration of education, science, and production in the institutions of higher education of Ukraine are formed.

The research was conducted in order to test the methodology and outlined components of future specialists’ readiness to carry out professional activity through the integration of education, science, and production, namely: motivational-emotional, cognitive, activity, and reflexive.

In the process of conducting the ascertaining stage of the study, it was revealed that most of the future specialists are clearly aware of themselves as the subjects of dual education, but have not sufficient experience in studying in this form.

On the basis of a qualitative analysis of the diagnostic study, it was found that future specialists are not sufficiently aware of the functions that should be performed while studying in the dual form of training and what competencies they should possess.

However, the summarized results of the formative stage of the experiment after the introduction of author’s techniques give reason to claim that 20 % of respondents in both control and experimental groups are at low readiness for professional activity through integration of education, science, and production, while the vast majority - about 80 % - are on medium and high levels of readiness.

Thus, the development and implementation of updated forms and means of forming the professional competence of future specialists will increase their readiness for professional activity in the dual form of study.

A promising area of further research is the consideration of modern programs, including remote ones, enhancement of professional competence of future specialists, the use of digital technologies to ensure their training in the dual form of learning. The presented results of the scientific research, as well as the conclusions and prospects of further research, can be used as an effective scientific base to improve the training of future specialists in the dual form of education in different countries.

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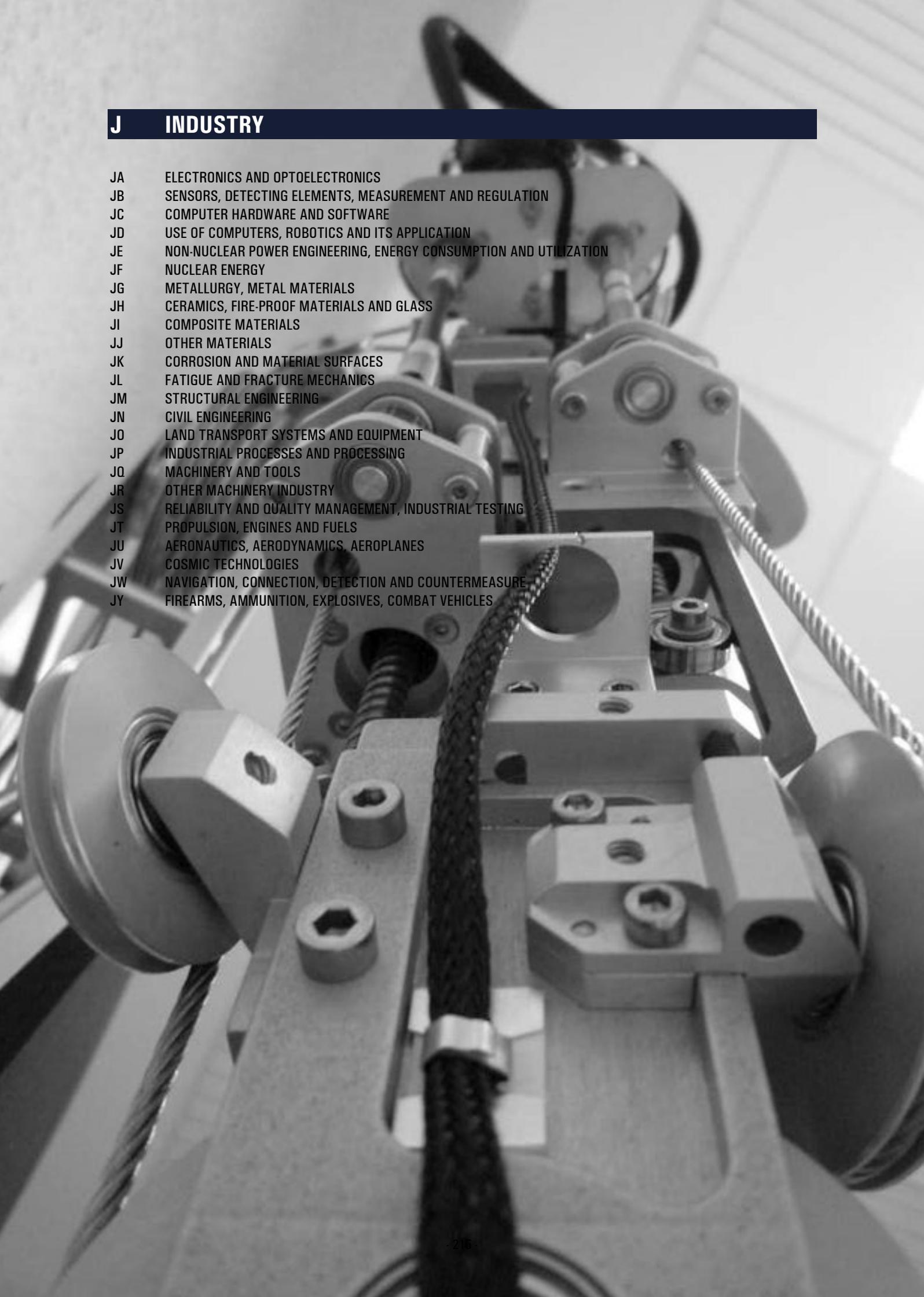
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Primary Paper Section: A

Secondary Paper Section: AM



J INDUSTRY

JA	ELECTRONICS AND OPTOELECTRONICS
JB	SENSORS, DETECTING ELEMENTS, MEASUREMENT AND REGULATION
JC	COMPUTER HARDWARE AND SOFTWARE
JD	USE OF COMPUTERS, ROBOTICS AND ITS APPLICATION
JE	NON-NUCLEAR POWER ENGINEERING, ENERGY CONSUMPTION AND UTILIZATION
JF	NUCLEAR ENERGY
JG	METALLURGY, METAL MATERIALS
JH	CERAMICS, FIRE-PROOF MATERIALS AND GLASS
JI	COMPOSITE MATERIALS
JJ	OTHER MATERIALS
JK	CORROSION AND MATERIAL SURFACES
JL	FATIGUE AND FRACTURE MECHANICS
JM	STRUCTURAL ENGINEERING
JN	CIVIL ENGINEERING
JO	LAND TRANSPORT SYSTEMS AND EQUIPMENT
JP	INDUSTRIAL PROCESSES AND PROCESSING
JQ	MACHINERY AND TOOLS
JR	OTHER MACHINERY INDUSTRY
JS	RELIABILITY AND QUALITY MANAGEMENT, INDUSTRIAL TESTING
JT	PROPULSION, ENGINES AND FUELS
JU	AERONAUTICS, AERODYNAMICS, AEROPLANES
JV	COSMIC TECHNOLOGIES
JW	NAVIGATION, CONNECTION, DETECTION AND COUNTERMEASURE
JY	FIREARMS, AMMUNITION, EXPLOSIVES, COMBAT VEHICLES

JUSTIFICATION OF THE LOAD STANDARDS FOR THE IMPLEMENTATION OF TASKS BY THE INSPECTOR COMPOSITION OF EMERGENCY PREVENTION UNITS

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Abstract: The conducted studies are devoted to the method of assessing the number of inspectors, which is based on the balance between the quality of the performance of preventive functions to prevent emergencies and the load standards for the implementation of the corresponding function. Statistical data on fires and the performance of functions by the inspectorate in Ukraine are provided. An analysis of literary sources on the methods of determining the number of employees was carried out, their comparison was conducted; advantages and disadvantages were identified and examples of implementation in practical activities were given. The criterion that should be used when assessing the number of inspectors has been determined. The procedure for substantiating the load standards for the implementation of the functions of the inspectorate is proposed as a basis for the development of methodological recommendations for calculating the required staffing of the inspectorate of prevention units. A list of the main functions of the inspection staff of the prevention units, which are assigned to them by the relevant normative documents, has been established. The dependence of the labor costs required for supervision of one economic object depending on the total number of economic entities was established. A mathematical method was selected and implemented for processing the received statistical data on labor costs, which are used by territorial units during the implementation of the corresponding function. Load standards (labor costs) have been established for the implementation of the relevant functions of the inspectorate of emergency prevention units. Methodological recommendations for determining load standards and calculating the required number of inspectors of emergency prevention units have been developed.

Keywords: load standards; inspection staff; units for the prevention of emergency situations; required staffing; prevention.

1 Introduction

There are many approaches and methods for optimizing organizational staffing structures and the number of workers in organizations [1, 3, 4, 9, 13], among them there are normative (methods of technical standardization), analytical (methods of analytical research), experimental and statistical, the method of correlation-regression analysis, and others. For example, the normative method provides for the calculation of the total number of employees based on certain criteria that are laid down in normative legal acts. In our case, such criteria can be indicators of the inspectors' activity, such as the number of objects to be inspected during the planned period, etc. [18].

The analytical method is based on periodic evaluation of production indicators and economic costs with further conclusions regarding the quantitative composition of employees, which are based exclusively on economic criteria. The basis of the research-statistical method is the assessment of production indicators in comparison with a certain period, which is implemented with the help of statistical data. The method of correlation-regression analysis establishes the dependence of the number of employees on such factors as wages, business trips, the need to involve third-party organizations, etc.

The general drawback of the above-mentioned methods is that they do not take into account such an indicator as the load standard, the performance of a certain function, which, in our opinion, should be the basis of the method of determining the number of inspectors. Since, on the one hand, an unreasonably understaffed number will lead to low-quality performance of

emergency prevention functions, which in turn will lead to an increase in the number and scale of emergency situations; on the other hand, an excessive number of personnel will lead to unreasonable economic costs.

Therefore, the approach based on the balance between the quality performance of emergency prevention functions and load standards during the assessment of the number of inspectors needs scientific justification.

According to statistical data in Ukraine [2], the number of fires has almost doubled over the previous decade; 1,853 people died as a result of the fires, including 35 children; 1,383 people were injured, including 90 children. Material losses from fires amounted to 13 billion 363 million 545 thousand UAH (of which direct losses amount to 3 billion 181 million 197 thousand UAH; indirect losses - 10 billion 182 million 348 thousand UAH).

The main data characterizing the situation of fires in the state are presented in Figure 1.

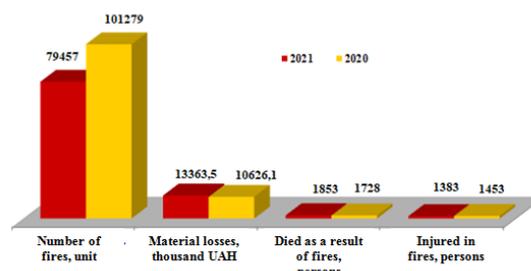


Figure 1. The main indicators characterizing the situation of fires in the state in 2021 compared to 2020

It should also be noted that on the territory of Ukraine, 109 thousand 938 objects with high, 123 thousand 206 objects with medium, and 226 thousand 883 objects with insignificant level of risk, as well as 35 thousand 372 objects of government bodies are registered in the state supervision (control) bodies in the field of man-made and fire safety objects. According to statistical data, every year state supervision bodies in the field of man-made and fire safety conduct about 100,000 planned and unplanned inspections of the objects of government bodies and business entities, as a result of which about 1 million measures are proposed and about 50,000 administrative protocols are drawn up. Data on the number of objects serviced by the inspection staff are shown in Figure 2.

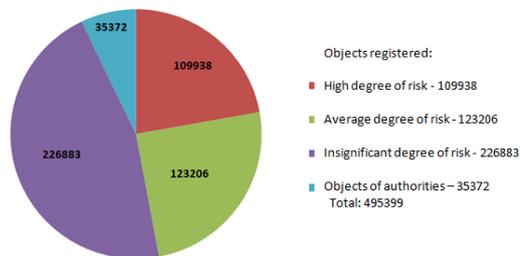


Figure 2. The number of objects in Ukraine serviced by the inspection staff

Thus, the substantiation of load standards (labor costs) for the implementation of the corresponding function of the inspection staff of emergency prevention units, as a scientific basis for the development of methodological recommendations for determining the load standards and calculating the required

number of inspectors of emergency prevention units is an urgent scientific and technical task.

2 Materials and Methods

Today, the basis of the methodology [19], which is used to determine the required number of inspectors of emergency prevention units, is based on the ratio of the annual amount of working time required for the performance of functional duties to the useful annual fund of working time of this employee. A differentiated approach to determining the required number of employees is ensured by the introduction of correction coefficients and it takes into account only the quantitative indicator, but does not allow considering the list of new functions or tasks and the complexity of their implementation by supervision (control) units.

According to [5, 18], the inspectorate of emergency prevention units performs the following functions:

- Organization and planning of work, general issues;
- Implementation of state supervision (control) and registration of documentation based on the results of measures;
- Administrative activity;
- Implementation of market surveillance measures;
- Preventive and informative work;
- Preparation of fire materials;
- Consideration of applications from legal entities and individuals;
- Work with local executive bodies and local self-government bodies.

High-quality performance of these functions requires a reasonable and optimal number of inspectors of emergency prevention units, which implies the use of appropriate research methods and determination of the required number of inspectors of emergency prevention units.

According to the results of the analysis of literary sources and research works carried out in this area [19, 12, 15, 16], it was established that there are a number of methods for establishing a justified number of employees - among them, there are such as: indirect rationing method, correlation-regression analysis, method of specific types of work labor intensity, a method based on technical and economic indicators, a method using tactical data of fire and rescue units.

The method of indirect rationing establishes the dependence of the number of employees on the characteristics of the object (population, number of buildings, danger of production facilities, etc.). This method is easy to use, but it has low accuracy, it allows obtaining averaged standards of numbers that take into account the volume and labor intensity of the work being performed. At present, methods of indirect rationing are widely used in determining the number of administrative units in various branches of economy.

The description of this method is given in works [2, 9, 13]. The authors obtained analytical ratios of the dependence of the number of fire protection workers on the population, the number of houses, industrial enterprises, the value of fixed assets, etc. The method is also applied in [6].

Correlation-regression analysis establishes the dependence of the number of employees on some factors (wages, material costs, business trips, the need to involve third-party organizations, etc.) [12]. This method allows building the dependence of the staff number on the influence of factors, but it is difficult to use, requires reliable statistics, and has no analogues for practical use.

To select the most significant factors affecting the staff number, a matrix of pairwise correlation coefficients is calculated. The correlation coefficients between the factors can be used to judge their relationship. At the same time, the absolute value of the correlation coefficient close to zero shows the insignificant influence of this factor. The final selection of factors is

performed in the process of stepwise multiple regression analysis using a standard computer program.

On the basis of the numerical values of factors affecting the number of specialists, by applying the method of mathematical statistics for a given group of specialists, normative formulas for each management unit are constructed in the form of power (logarithmic) or linear multifactorial regression equations:

$$H = a_0 x_1^{a_1} \cdot x_2^{a_2} \cdot \dots \cdot x_n^{a_n} \quad (1)$$

$$H = a_0 + a_1 x_1 + a_2 x_2 + \dots + a_n x_n \quad (2)$$

where H - the norm of the number of specialists;
 x_1, x_2, \dots, x_n - the importance of factors determining the number of specialists;

a_1, a_2, \dots, a_n - regression coefficients (factor coefficients) characterizing the degree of influence of the relevant factor on the number of specialists;

a_0 - constant coefficient of the regression equation (normative formula).

The type of functions of the connection between the staff number and the set of factors was selected in the process of processing these data on a computer with the help of specialized software for the automatic calculation of time and number norms. According to the regression equation, the calculated values of the staff number are obtained.

The method of labor intensity of specific types of work determines the number of employees based on the labor intensity of performing basic tasks and functions. This method requires reliable statistics and mathematical processing, due to which it gives a fairly reliable option. The method was applied in article [17] and used in previous research works [12, 15].

According to [10], at an enterprise with 50 or more employees, the employer creates a labor protection service in accordance with the standard provision approved by the central executive body, which ensures the formation of state policy in the field of labor protection.

At an enterprise with less than 50 employees, the functions of the labor protection service can be performed part-time by persons who have the appropriate training.

At an enterprise with less than 20 employees, third-party specialists with appropriate training may be engaged on a contractual basis to perform the functions of the labor protection service.

The scientific work [16] considered the composition of the structure of the fire safety service and proposed a model that allows determining the number of structural subdivisions at the facility; fire hazard of production, including categories of production, the number of working personnel, volumes of preventive and supervisory functions are considered.

The calculation of the number of employees of the fire safety service of the production structural unit S, depending on the explosion and fire hazard of the production, is carried out according to the formula:

$$S = 2 + \frac{P_{av} K_H R_O + R_P}{F} \quad (3)$$

where S - the number of employees of the fire safety service;
 P_{av} - the average number of employees of the facility;
 K_H - coefficient that takes into account the dangerousness of production;
 R_O - annual time spent on preventive work by one employee of the fire safety service;
 R_P - annual expenditure of time for visiting objects located outside the territory of the main enterprise to carry out preventive work by one employee of the fire safety service;
 F - effective annual fund of working time of one specialist of the fire safety service.

A similar formula is used to calculate the number of preventive workers of the local or voluntary fire department of the settlement.

The coefficient K_H , which takes into account the fire and explosion hazard of production, is determined by the formula:

$$K_H = 2 + \frac{P_p + P_H}{P_{av}} \quad (4)$$

where K_H - coefficient that takes into account the dangerousness of production;

P_p - the number of employees of the facility who perform work with an increased fire hazard;

P_H - the number of employees of the facility who work in explosive and fire-hazardous premises;

P_{av} - the average number of employees of the facility.

K_H can be a maximum of 3 if all employees perform work with increased fire danger and all work in explosion- and fire-hazardous premises.

The annual time expenditure R_p for preventive work by one employee of the fire safety service is determined by the formula:

$$R_p = 2 \sum_{i=1}^{N_1} t_i n_i \quad (5)$$

where i is the number of types of equipment, devices, etc.;

N_1 - the number of types of equipment, devices, etc., which require periodic inspection by an employee of the fire safety service;

t_i - time norm for inspecting a unit of equipment, devices, etc.;

n_i is the number of units of equipment, devices of the i -th type that require periodic inspection by an employee of the fire safety service.

The annual time expenditure R_p for visiting objects located outside the territory of the main enterprise for preventive work by one employee of the fire safety service is determined by the formula:

$$R_p = 2 \sum_{j=1}^{N_2} T_j \quad (6)$$

where N_2 - the number of production facilities located outside the territory of the main enterprise;

T_j - time spent (hours) traveling to the j -th object in both directions;

j - takes into account working time spent on vacation and is equal to 252 working days minus 24 vacation days multiplied by 8 hours, which is equal to 1824 hours.

The method based on technical and economic indicators, usually used in small commercial structures, establishes the number of employees by comparing production and economic indicators. The method requires constant monitoring and changes to staffing. It allows for the possibility of a non-rational result and is not applicable for large objects, organizations, and institutions.

In the method using tactical data of fire and rescue units, the number of inspectors according to this method is established depending on the frequency of departures of fire and rescue units. The method was used in a research paper [17], but it does not have sufficient approval and requires reliable statistics and mathematical processing.

Based on the results of the analysis of literary sources, it can be concluded that one of the criteria when assessing the number of inspectors is the laboriousness of performing a certain function, which in turn requires an analysis of the functions of the inspectors for further justification of the load standards necessary for their implementation.

The results of research on the justification of the number of employees using various approaches are given in the literature. At the same time, the question of the dependence of the number of inspectors of emergency prevention units on the load

standards necessary for the high-quality performance of the corresponding function remains unexplored.

The purpose of this work is to establish the load standards (labor costs) depending on the type of task of the emergency prevention unit, as a scientific basis for the development of methodological recommendations for determining the load standards and calculating the required number of inspectors of the emergency prevention units.

In order to achieve the goal, the Ukrainian and foreign regulatory frameworks for calculating the required number of inspectors of emergency prevention units were analyzed, the tasks, functions, and time spent (labor intensive) for their implementation were investigated, methodological approaches (mathematical models) for data processing on calculation of the standard number of inspectors of emergency prevention units were studied and analyzed. Also, in order to achieve the set goal, it is necessary to collect, summarize, and process statistical data from territorial divisions regarding labor costs necessary for the implementation of a certain function. Investigation and determining the main tasks of the inspectorate of the emergency prevention units and developing methodological recommendations for determining the load standards and calculating the required number of inspectors of the emergency prevention units appears to be the relevant task.

The object of research is the implementation of emergency prevention functions by the inspectorate.

The subject of the research is the impact on the load standards (labor costs) of certain types of main tasks of the inspectorate of emergency prevention units.

The following procedure is proposed to establish the standards of loads necessary for the performance of the corresponding task or function:

- Establishment of a list of the main tasks and functions of emergency prevention units;
- Development of a survey questionnaire for collecting statistical data necessary during the justification of load standards for the implementation of the corresponding task or function;
- Summarization of the collected data according to load standards for the implementation of the corresponding task or function;
- Choosing a mathematical method for processing statistical data and establishing load standards for the implementation of the corresponding task or function;
- Development of methodological recommendations for determining load standards and calculating the required number of inspectors of emergency prevention units.

During the implementation of the proposed order, the basis should be the method, which consists in the assessment and further determination of an adequate ratio between the number of employees required to perform the functions assigned to them and the real labor costs (loads) necessary to perform such functions.

In order to determine the required number of staff and establish load standards for the implementation of the main tasks defined in [5, 11, 18], a list of the main functions of the inspectorate of emergency prevention units was established, which includes the following functions:

1. organization and planning of work regarding state supervision (control) in the field of man-made and fire safety, general issues;
2. implementation of state supervision (control) in the field of civil protection, fire and man-made safety and preparation of documentation based on the results of measures implemented;
3. accompanying protocols on violations of requirements in the field of civil protection, fire and man-made safety to the court;

4. implementation of measures of state market supervision;
5. campaigning and informational work in the field of civil protection, fire and man-made safety;
6. registration of materials on fires, formation of cases;
7. consideration of applications from legal entities and individuals on issues of civil protection, fire and man-made safety;
8. work with local executive bodies and local self-government bodies to comply with the requirements of civil protection, man-made and fire safety.

3 Results and Discussion

An approach based on the analysis of statistical information on working time costs [8] was chosen. For this purpose, relevant statistical data on labor costs, which are used by territorial units during the implementation of each of the functions defined above, have been collected.

Based on the results of the data analysis from the territorial divisions that perform the functions of supervision and control in the field of fire and man-made safety, the dependencies of the load standards for one economic entity depending on their total number have been established (Figure 3).

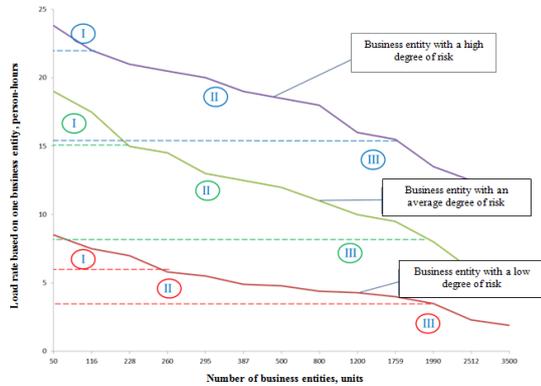


Figure 3. Dependence of load standards on the number of economic entities, in relation to which the functions of supervision and control are performed

Analyzing the dependence shown in Fig. 3 for all business entities, regardless of the degree of risk, two characteristic zones (I and III) can be distinguished for the reduction of regulatory loads for servicing one business entity. Zone I, when a small number of economic entities significantly increases the time allocated for the implementation of the function of supervision and control for one economic entity, can be explained by the surplus of time for the implementation of the specified functions for all economic entities; on the contrary, for zone III, when a large number of economic entities reduces the time allocated for the implementation of the function of supervision and control per economic entity, it is explained by the lack of time for the implementation of the specified functions for all economic entities. The specified zones are areas of error during the justification of load standards for the implementation of the functions of supervision and control by the inspectorate. Therefore, they were not taken into account during the further processing of statistical data, and zone II was taken into account.

The method of mathematical statistics was used for data processing, the essence of which consists in the following steps.

Before starting the calculation, statistical data are checked, according to [7], for the presence of outliers and quasi-outliers using the Grubbs test.

In order to determine the average load standards for the implementation of the main tasks and functions of the inspection staff of emergency prevention units, empirical distribution functions of the studied speed of movement are constructed based on histograms, with a corresponding assessment of the

parameters of the distributions (mean value and root mean square deviation).

The general theoretical approach to the construction of histograms and the calculation of their parameters is described in [14].

The load distribution parameters are calculated as follows. A sample of random values of loads $\{x\} = \{x_1, x_2, \dots, x_N\}$ is formed, where N is the size of the sample of random values. Based on it, a grouped statistical series is built. To determine the number of intervals of groups L , the Brooks formula is used:

$$L = 5 \lg N \quad (7)$$

The minimum and maximum values of the sample $x_{\min} = \min\{x_1, x_2, \dots, x_N\}$ and $x_{\max} = \max\{x_1, x_2, \dots, x_N\}$ are found, and the length of the group interval (step of the histogram) is determined by the formula:

$$\Delta x = (x_{\max} - x_{\min}) / (L - 1), \quad (8)$$

The limits of the k -th interval of the histogram are determined by the formulas:

$$x_{k-1} = x_{\min} - 0,5 \Delta x, \quad (9)$$

$$x_k = x_{k-1} + \Delta x \quad (10)$$

We determine n_k random variables from the sample $\{x\}$ that fell into the k -th interval $[x_{k-1}, x_k + \Delta x]$. For convenience, the limits of the intervals can be rounded, but the constancy of the step of the histogram Δx must be observed.

To construct a grouped statistical series of relative frequencies, the relative frequencies $p_k = n_k / N$ are calculated and the condition is checked

$$\frac{n_1}{N} + \frac{n_2}{N} + \dots + \frac{n_L}{N} = 1 \quad (11)$$

For the graphical presentation of the histogram, the heights H_k of the rectangles of the histogram are calculated

$$H_k = n_k / \Delta x \quad (12)$$

and the maximum height value $H_{\max} = \max\{H_1, H_2, \dots, H_L\}$ is determined.

On the abscissa axis of the histogram graphs, the starting point x_0 is selected and the scale is such that the segment $[x_0, x_L]$ fits completely. On the ordinate axis, the beginning of the reference is selected at point 0 and the scale is such that the segment $[0, H_{\max}]$ is completely included. For each interval $[x_{k-1}, x_k]$, a rectangle of height H_k with base Δx is constructed. As a result, we get a histogram of absolute frequencies. To construct a histogram of relative frequencies, the value $p_k / \Delta x = n_k / N / \Delta x$ is used as the height of the k -th rectangle.

The mathematical expectation of the histogram μ_G is determined by the formula:

$$\mu_G = x_0 + \Delta x \left(\sum_{k=1}^L p_k K - \frac{1}{2} \right) \quad (13)$$

The dispersion of histogram σ_G^2 is determined by the formula:

$$\sigma_G^2 = (\Delta x)^2 \left[\frac{1}{12} + \sum_{k=1}^L p_k K^2 - \left(\sum_{k=1}^L p_k K \right)^2 \right] \quad (14)$$

Accordingly, the standard deviation is:

$$\sigma_G = \sqrt{\sigma_G^2} \quad (15)$$

Average load standards for the implementation of the main tasks and functions of the inspector staff of emergency prevention units are determined by the formula:

$$v = \mu_G - \sigma_G \quad (16)$$

Further, on the basis of the above approach, using formulas (7 - 16), calculations were made of the distribution of the costs of working time necessary to fulfill the functional duties of the inspector staff of emergency prevention units for each type of work.

Load standards for the implementation of the main functions of the inspector staff of emergency prevention units are calculated. In this way, for the first time, load standards (labor costs) were established for the implementation of the relevant functions of the inspector staff of emergency situations prevention units, the numerical values of which are given in Table 1.

Table 1: Load standards for the implementation of the main tasks and functions of the inspector staff of emergency prevention units

No.	List of main types of work	Load rate, man-hours
1	Implementation of state supervision (control) and preparation of documentation based on the results of measures, one business entity:	4.0
	▪ for business entities with a small degree of risk	10.6
	▪ for business entities with an average degree of risk	17.5
	▪ for business entities with a high degree of risk	
2	Filing lawsuits in court regarding violations of requirements in the field of civil protection, fire and man-made safety	2.1
3	Implementation of organizational and planning functions, functions of the state market surveillance body, campaigning and informational functions, functions regarding the preparation of materials on fires, functions regarding cooperation with authorities	74.9

Methodological recommendations for a differential approach when determining the required number of staff provide for the introduction of correction coefficients that take into account the peculiarities of the region: the number of serviced objects (registered), the number of fires (recording them, forming fire cases), the number of claims to court regarding violation of requirements established by law in the field of civil protection, fire and man-made safety.

The required number of staff includes the number of employees necessary for the implementation of the main tasks and is determined by the formula:

$$N = K \cdot \left[\frac{Q_{BEH} \cdot n_{obh} + Q_{BEM} \cdot n_{oba} + Q_{BEL} \cdot n_{obl} + Q_{AD} \cdot n_L}{m} + Q_t \cdot P_1 \cdot P_2 \cdot P_3 \right] \quad (17)$$

where K is the coefficient that takes into account the time spent by employees on sick leave and vacations and is 1.15;

Q_{BEH} , Q_{BEM} , Q_{BEL} - total labor costs per business entity, for entities with high, medium, and low risk levels, man-hours;

Q_{AD} - total labor costs based on one lawsuit in court regarding violations of requirements in the field of civil protection, fire and man-made safety, man-hours;

n_{obh} , n_{oba} , n_{obl} - the average number of economic entities that are subject to supervision (control) during the year within the region;

m - annual rate of working time for one employee, with a 40-hour work week, h;

Q_t - general labor costs for the implementation of organizational and planning functions, functions of the state market supervision body, campaigning and information and explanatory functions, functions regarding the preparation of materials on fires, functions regarding cooperation with authorities in terms of compliance with the requirements of civil protection, fire and man-made safety (in man-hour);

n_L - the number of lawsuits in court for the region;

P_1 , P_2 , P_3 are correction coefficients.

4 Conclusion

The work solves an actual scientific and technical task - determination of average load standards for the implementation of the main tasks of the inspectorate of emergency prevention units. As a result of the research, the following scientific and practical results and conclusions were formulated:

1. It has been established that the largest load standards (labor costs) during the activities of the inspectorate of the emergency prevention units in 2020-2021 fall on the implementation of state supervision (control) in the field of civil protection, fire and man-made safety and the drawing up of a declaration based on the results of the implementation of measures, as well as support of lawsuits in court regarding violation of requirements established by law in the field of civil protection, fire and man-made safety.
2. The procedure for substantiating the requirements of methodological recommendations for determining load standards and calculating the required number of inspectors of emergency prevention units is proposed. At the same time, it is planned to use the method, which consists in the assessment and further determination of the adequate ratio between the number of employees necessary for the fulfillment of tasks entrusted to them, according to the provisions of regulatory and legislative acts, tasks and functions, and the actual labor costs (load) necessary for their implementation.
3. The dependence of load standards for one economic entity depending on their total number is established. Such dependence shows that the small number of business entities that are served creates a surplus of time for the implementation of supervision and control functions, as a result of which labor costs are unreasonably overstated. On the contrary, the large number of business entities that are served creates a shortage of time for the implementation of the functions of supervision and control, as a result of which these functions may not be performed well and not in full.
4. It was established that during the calculation of the required number of inspectors, in order to ensure a differentiated approach, it is necessary to provide for the introduction of correction coefficients.
5. Load standards (labor costs) for the implementation of the relevant tasks and functions of the inspection staff of emergency prevention units were established, which are for:

Implementation of state supervision (control) and preparation of documentation based on the results of measures, per one business entity:

- For economic entities with a minor (insignificant) degree of risk - 4.0 man-hours;
- For business entities with an average degree of risk - 10.6 man-hours;
- For business entities with a high degree of risk - 17.5 man-hours.

Implementation of lawsuits in court regarding violations of requirements in the field of civil protection, fire and man-made safety - 2.1 man-hours.

Implementation of organizational and planning functions, functions of the state market surveillance body, campaigning and informational functions, functions related to the preparation of materials on fires, functions related to cooperation with authorities - 74.9 man-hours.

6. In further studies, it is expedient to continue the mentioned work in terms of approbation and determination of reliability limits of the calculation results according to the developed methodical recommendations.

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USE OF DIGITAL TECHNOLOGY TOOLS FOR FORMING THE READINESS OF FUTURE SPECIALISTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT LABOR MARKET OF UKRAINE

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Abstract: The problem of the use of digital technologies by future specialists in the field of higher education in Ukraine was studied. It has been proven that investment in the development of digital skills is a critically important factor in the country's economic growth and competitiveness. The prospects of transformational processes, which allow increasing the efficiency of universities within the framework of the concept of University 4.0, are shown. Among the necessary skills of a modern specialist, we have highlighted: complex problem solving, critical thinking, mobility, creativity, leadership qualities, time management, coordination of actions with others, emotional intelligence, judgment and decision-making, service-orientation, negotiation, cognitive flexibility. To determine the level of formation of the components of future specialists' readiness for the implementation of digital technologies, we used the following components: informational and motivational, cognitive, activity, reflective. The proposed methodology was tested within the framework of an empirical study of the level of readiness of future specialists for the introduction of digital technologies. 84 students of the Faculty of Technological and Professional Education of Glukhiv National Pedagogical University named after Oleksandr Dovzhenko participated in the study: (EG) - 40 students and (CG) - 44 students. The value-motivational criterion of the formation of digital competence of future specialists was evaluated using the method "Diagnostics of values and motives of digital activity", cognitive one was evaluated using "Diagnostics of knowledge, abilities, skills of using augmented reality tools in future professional activities", activity component – with the help of "Diagnostics of the level of technological readiness", reflective – with "Diagnostics of the level of personal and creative readiness of future specialists for professional activity".

Keywords: digital technologies; readiness components; future specialists; labor market; digital competence; training of future specialists.

1 Introduction

In modern conditions, characterized by the formation of the digital space in the global context and the digital economy as a new form of economic activity, there are significant changes in the activities of universities. Industry 4.0 involves the training of professional personnel of a new level, fundamental changes in higher education.

Since the new modes of production involve a continuous process of transmission, accumulation, processing, and analysis of information, "the new person" must be able to cope with these continuous flows. That is why the development of Industry 4.0 is closely related to the introduction of lifelong learning institutions, which involves the constant perception of new information by a person and the continuous improvement of skills. This is also due to the acceleration of technological progress, which constantly makes new demands on a labor market participant. An individual must be adaptive and flexible, have skills in working with digital systems, perform analytical operations and cope with a constant flow of information. Namely these skills and knowledge a graduate needs in order to integrate into a new mode of production. At the same time, the assimilation of these skills and knowledge is in itself a process of accumulating human potential, while the application of skills related to new digital literacy within the Industry 4.0 contributes to unlocking this potential.

The dynamic development of Ukrainian society in modern conditions requires interpersonal interaction of future specialists in all spheres of activity. The modern reality and relevance of the digital transformation of professional activity requires the future

specialist to develop digital competence. The ability to interpret and analyze information obtained with the help of digital technologies, which acquires the characteristics of Big Data [1], obtains the greatest significance.

Today, the modern requirement of the labor market is the presence of competent, responsible, competitive specialists who possess critical thinking, show their own initiative in solving professional issues, creativity, social activity and professional mobility, competently and consciously use the means of digital technologies in their professional activities. Currently, digital technologies are a tool that is actively used in education and contributes to the improvement of its quality [26].

The digital transformation of Ukrainian education aims to increase its quality, achieve new educational results, adequate to the requirements of the modern digital society. Today, new requirements occur for all participants of the educational process: from personal and professional qualities, creativity, creative possibilities to knowledge and skills of operating them. In the digital society, human education takes place in the conditions of a digital educational environment, one of the purposes of which is the development of the specialist's digital competence. Today, digital technologies play a significant role in the development and improvement of the quality of modern education.

Prospects for the development of the educational process in institutions of higher education imply the use of digital forms, methods, and tools of learning, which strengthen the effectiveness of the formation and development of digital competencies of the future specialist. Digital technologies occupy a high level in the development and improvement of the quality of modern higher education, the preparation of the digital generation of specialists, as well as the creation of the necessary conditions for their further self-improvement, which is emphasized by the relevance of our research [27].

The process of informatization of modern society significantly affects not only the state of the economy and the standard of living of people, but also the requirements for the quality of education, therefore an important task of building information society in Ukraine is the introduction of digital technologies into the educational process of training specialists.

Changes in the education system that occur under the influence of digitalization are widely discussed in the literature [7, 12]. Much has been written about the benefits of digital technologies used in higher education [12]. Such advantages include: wide access of students to educational information resources; the ability to build individualized educational trajectories; transparency of the activities of educational organizations; optimization of interaction between teachers and students, between all participants in the educational process; formation of mobile structures for managing the educational process, etc.

It should be noted that many world and Ukrainian universities are actively building their "digital infrastructure", which requires significant investment. At the same time, the return on these investments is planned to be high and is expected in the near future. However, as studies show, it is necessary to continue to increase infrastructure investments, including in new educational technologies, while simultaneously raising the priority of investments in the human capital of universities, which, most often, turns out to be "underinvested" [21]. Valuable for the university are its human resources, which should develop in accordance with the ongoing digital transformation.

The development of digital technologies in the field of education is dictated by relevance and is supported at the state level and by the general public. Digitization is a new social situation of "digital divide", "digital citizenship", "digital socialization" [10].

However, the changes in education associated with its digitalization will lead to profound changes in the labor market. The competitiveness of a specialist in the labor market in modern conditions directly depends on his digital competence. Although there is a common understanding of the typology of digital skills and digital competencies has not yet been shaped, practice shows a number of clear trends. In particular, the “skills of using digital economy services”, which include the ability to use services and processes implemented on the basis of the infrastructure of the Internet of things, are becoming more widespread.

The EU countries have developed a model of digital competencies in five areas [12]:

- 1) Information literacy (search and extraction of digital data, information and content, data storage, etc.);
- 2) Communication and cooperation (the ability to interact and communicate, participate in society life using digital technologies, etc.);
- 3) The ability to create digital content, which implies the ability to develop and edit digital content to improve and integrate information and content into the existing body of knowledge, subject to the requirements of copyrights and licenses, i.e., to know how to write understandable instructions for a computer system;
- 4) Ensuring the security of devices, content, personal data and data privacy in digital environments, i.e., the ability to protect the physical and psychological health of workers, to be aware of the impact of digital technologies on the environment;
- 5) Solving emerging problems (using digital tools to introduce innovations in processes and products).

In addition, the so-called talent marketplaces, digital platforms that bring together employers and job seekers in the process of job search and recruiting, enabling and facilitating the creation and development of professional communities, continuous training and career planning, are becoming more widespread.

The concept of digital literacy has gone through several transformations, appearing in the second half of the last century. Initially, it was understood as just a set of technical skills in using computers and other primitive technical systems at that time. However, digital literacy at that time was not considered something necessary - it was an attribute, first of all, of technical specialists who had to directly interact with data and systems. In today's world, there is a completely different 'picture'. Industry 4.0 implies a broad work with data under a significant individualization of employment, an expansion of the range of tasks for each individual, a much greater role for creativity. All this is connected with the processes of technologization, robotization, and digitalization.

The modern concept of digital literacy is defined as follows: “it is the ability of a person to safely use digital technologies to receive, process, store, transmit information, communicate and collaborate, manage digital identity and reputation, create and edit digital content, taking into account knowledge of copyright, ethical standards and responsibilities, organize the security of devices and personal data, manage the privacy settings of information, maintain digital devices, ensure the preservation of physical and psychological health, social well-being, and solve problems of a personal, professional, and public nature” [5]. This digital literacy is today an integral component of the competence not only of technical specialists and representatives of STEM specialties, but of all labor market participants - from educators to managers and marketers.

As can be seen from the definition, modern digital literacy implies a set of a large number of skills and abilities, the formation of which is not an easy task. That is why some authors call it a “pedagogical phenomenon”, emphasizing the complexity of the concept, which involves a number of occupations and activities aimed at mastering digital literacy, which involves, first of all, the use of digital technologies to form the readiness

of future specialists that meet modern labor market requirements.

At the moment, graduates of higher education institutions in Ukraine are often unable to immediately integrate into the digitalized workflow in the workplace. This is a reason for further reorganization of the educational process in frames of digitalization and introduction of the University 4.0 concept.

2 Materials and Methods

In accordance with modern challenges, the need for transformations in higher education is defined in normative and legal documents of Ukraine, namely: laws “On higher education”, “On professional development of employees”; decrees of the President of Ukraine “On measures to improve the higher education system of Ukraine”, “On measures to develop the national component of the global Internet information network and ensure wide access to this network in Ukraine”, “On measures to ensure the priority development of education in Ukraine”, “On The National Strategy for the Development of Higher Education in Ukraine for the period 2022-2032”; in the Concept of the development of digital competences until 2025, the Concept of the development of e-government in Ukraine; provision on electronic educational resources.

Numerous national regulatory documents that have been adopted in Ukraine plan the stages of development of digital society and media, which provide for the reform of the telecommunications infrastructure and the introduction of online services, in particular, the electronic system in the field of health care and e-learning [21].

In 2021, the European Commission introduced the Digital Competence Framework for Citizens (DigComp 2.0), which is one of the basic strategic documents regarding the issue of digital education development [1].

The issue of informatization of education and the features of the formation of the educational information environment by means of digital educational technologies were considered by such Ukrainian scientists as M. Boyko, H. Genseruk, A. Gurzhii, T. Koval, K. Kolos, V. Oliynyk, R. Sharp (features of the formation of the information educational space and the use of information and communication technologies (ICT) in educational activities); V. Bykov, M. Zhaldak, A. Kolomiets, N. Morse, L. Petukhova, S. Semerikova, S. Benet, F. Kirkman (psychological and pedagogical provisions of the theory of informatization of modern education and features of the use of digital technologies in the educational process of a higher school); D. Belshaw, R. Hobbs, P. Murphy, K. Miller, M. Resnik (essence, fluency in digital competence and development of digital culture of future specialists), and others.

The authors of this article in previous studies revealed the theoretical and methodological aspects of using digital educational technologies for training future specialists; a cross-section of the levels of educational achievements of future specialists from the determined value-motivational, cognitive, activity, reflective components and indicators of the formation of digital competence was carried out; the levels of formation of digital competence of future specialists are determined (high, medium, low).

A complex of general scientific theoretical, empirical, and statistical methods was used – in particular, synthesis, conceptualization, experiment, and statistical methods. In frames of the research, processing of the data obtained at the ascertainment and control stages, their comparative analysis were carried out, and verification of the obtained results by methods of mathematical statistics was conducted.

In frames of the empirical study, 84 students of the Faculty of Technological and Professional Education of the Hlukhiv National Pedagogical University named after Oleksandr Dovzhenko took part in the pedagogical experiment: (EG) - 40 students and (CG) -44 students.

3 Results and Discussion

Digital training occupies a prominent place in the professional education of a digital generation student who, in addition to basic digital competencies (preparation of text documents, presentations, tests, etc.), will possess innovative practices for implementing adaptive, blended, distance, cloud, and mobile learning, etc.

The culture of the post-industrial phase is a culture (cultivation) primarily of communication and sociability. The construction of common contexts and the creation of complex forms of organization of activity (meta-machines), the interaction of active persons outside of unified “identities” - all this requires a developed culture of digital communication. At University 3.0, educational and scientific departments of the economic and humanitarian profile come to the fore. In addition to rational justification, the actual design of the activity and its components is required, and, respectively, the following become important subjects: policy and change management; management and innovation management; social design and engineering; digital technical design; design and construction of sign-symbolic systems; foresight and future research. University 3.0, or more precisely, its avant-garde type - an innovative technological university - overcomes the positivist “research of the world as it is”, deploying project work and “creating new practices”. It opposes “industrial” universities with their inert educational process, which includes standard course packages that quickly become obsolete. The “material body” of the University 3.0 includes, in addition to classrooms, libraries, laboratories, - also business incubators and technology parks, design bureaus, project offices [19]. At the same time, at University 4.0, as its natural evolution “in step” with the evolution of society and the economy, a human, including on a personal level, gets unprecedented opportunities for establishing (mental, design and activity one) of a “new reality” [26]. The positivist paradigm of education is being replaced by the constructivist one. “University 4.0 overcomes the “reproduction of the given” - the given foundations and forms of thinking and activity. It becomes an extremely open environment - a hub for various communications, a node at the intersection of many networks (informational, social, activity). These communications, research and project development involve ‘in their orbit’ not only professors and students, but also a wide range of external participants. One can say that the fourth generation university is an infrastructural platform for deploying a wide range of search activities (research, design, creation of new practices). For these activities, the university provides various subjects (individual and institutional) with itself as a platform, provides communication and navigation opportunities” [19]. Thus, the university of the future is a University 4.0, a concept that is formed around a digital university and the use of digitalization opportunities as the main tool for a flexible change in communication between the main participants in the educational process, whose result is aimed at solving the challenges of modern industry.

When designing University 4.0, it should be based on the following principles: 1) Speed/flexibility; 2) Transparency and openness; 3) Personal orientation; 4) Productivity. If we consider University 4.0 from the point of view of the interaction of all participants in the educational process, we can single out the main idea that will distinguish such a university from the rest. The use of digital tools (artificial intelligence, data analysis, management based on Big Data) will allow to clearly monitor educational results at all stages of communication between students, and feedback from the customer (business, science, government, etc.) will allow to almost instantly respond and change educational programs (adaptive learning, individual educational programs). This approach makes it possible to solve the problem of training high-quality specialists with the set of competencies that are in demand at the moment, as well as predict the demand on the labor market for the future.

M. Gueve and E. Exposito proposed a scheme of analogy between the different industrial and university revolutions (see Figure 1 below).

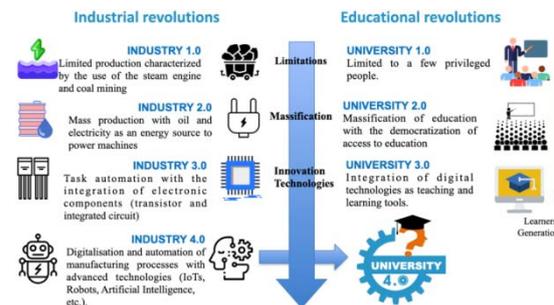


Figure 1. Analogy between the different industrial and university revolutions [9]

The schematic model of University 4.0 itself is demonstrated on the Figure 2 below.

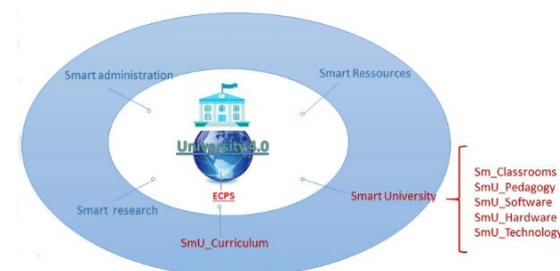


Figure 2. University 4.0 schematic conceptual model [2]

Digital technologies create conditions that differ from traditional ones in the learning process: the ability to study remotely, an increase in the level of educational autonomy and responsibility, the loss of the value of “encyclopedic memorization”, the strengthening of the practical component due to the simulation of a professional environment (for example, virtual surgery rooms for medical students), etc. Although recent experiments demonstrate, on the one hand, an excessive cognitive load of students when using virtual reality in the learning process, on the other hand, they demonstrate higher learning outcomes [5]. There is a need for teachers to adequately use not only digital technologies as teaching aids, but also to revise the entire pedagogical paradigm. Thus, we are witnesses of Kuhn’ paradigm shift in pedagogical and social science.

We are agree with by N. Morse's reasoning that when designing “digital activity”, the teacher focuses on the formation and development in higher education students’ skills necessary for a successful career, namely: complex problem solving, critical thinking, creativity, the ability to cooperate, emotional intelligence, skills of negotiation, cognitive flexibility [27].

Based on the analysis of numerous sources on the research problem, it is worth noting that in pedagogy there is no single approach to defining the concept of “digital technologies”. We understand this concept as the process of processing and transmitting information using coding symbols applied in computer technologies.

In the context of the transformation of Ukrainian higher education and the requirements of the modern digital society, we single out digital competence as an inseparable component of the professional competence of highly qualified specialists, which we consider as the ability and skill to rationally and systematically apply the latest technologies, educational practices or tools to achieve the set goals. The educational process should focus on the formation of the ability to productively use digital technologies and the development of critical and analytical thinking skills for its intensification,

effective processing of information and its further application in professional activities [14].

Particular importance should be attached to the use of modern digital technologies and tools for the organization of the educational process in the internal network of the Internet. The tool for formulating the context of educational tasks by the teacher is the taxonomy (level classification of verbs) proposed by B. Bloom for the specification of educational goals (results). When designing "digital activity", the teacher, as it was mentioned above in N. Morse's reasoning, focuses on the formation and development of students' skills necessary for a successful career, namely: complex problem solving, critical thinking, creativity, the ability to cooperate, emotional intelligence, negotiation, cognitive flexibility [6; 8].

The use of digital technologies in the educational environment creates opportunities for managing the learning process, methodical support, optimal organization of the joint interaction of the teacher and students, updating forms of interpersonal communication [1].

The advantages of digitization of education include: attracting future specialists to independence; elimination of paper routine; reduction of stationary costs, use of electronic versions of textbooks or notebooks, which requires lower costs; availability of knowledge for people in remote settlements.

At the same time, there are also disadvantages of the digitalization concept: a decrease in the socialization of future specialists; decreasing attention to physical development; reducing the role of teachers [10; 24].

Taking into account the studies of scientists, we offer the following classification of digital technologies that should be used to form the digital competence of future teachers, namely:

- Learning Management Systems (LMS): Moodle, Google Classroom, WebCT, Blackboard, Canvas, and other platforms for online courses support.
- Tools/systems for publishing and sharing/interaction: YouTube, podcasts, eBooks, video lectures, Google Docs, Social Bookmarking, Mind Maps, Wikis, Blogs, etc.
- Social networks: Facebook, Instagram, Twitter, Clubhouse, LinkedIn, Ning, Academia.edu, etc.
- Interpersonal communication tools: e-mail, ZOOM, Viber, Telegram, WhatsApp, Skype, Discord, forums, webinars, Internet projects, etc.
- Mobile applications: software for use on smartphones, tablets, and other mobile devices.
- Content aggregation tools: RSS feeds, NetVibes, Google Reader, and other algorithms to ensure fast and high-quality collection of text data.
- Virtual reality: online games and programs for working in real time, virtual laboratories, etc.
- Evaluation and feedback systems: electronic testing (Google Forms, Moodle), reflection (feedback in audio or written form), electronic notes (Pages, Trello, Evernote), etc.

A distinguished classification of digital technologies will enable future specialists to build the educational process on the basis of productivity, mobility, and autonomy. The outlined digital technologies represent the main complex for the formation of the future specialist' digital competence [21].

At the ascertainment stage of experiment, with the aim of identifying digital tools that allow the teacher to create conditions for an active educational trajectory of students in an electronic educational environment (e-environment), monitoring of the use of online resources was carried out in the following areas:

- Tools for setting educational problems, generalization of the studied material, summarizing (Google Drive, Google Site);

- Tools for checking and consolidating knowledge, forming critical thinking (Learningapps, Educaplay, Flippity);
- Tools for organizing group work, reflection (MindMeister, Cacao, Bubblus, Mindomo);
- Tools for organizing independent work (Glogster, ThingLink, Google Drive) [16].

In order to check the input state of future specialists' readiness, in ascertaining stage of the experiment, 84 students of the Faculty of Technological and Professional Education of Hlukhiv National Pedagogical University named after Oleksandr Dovzhenko were enrolled as participants: (EG) - 40 students and (CG) - 44 students were involved. Although the University which was chosen for the experiment is of pedagogical specialization, we believe that the results obtained can be considered as conditionally representative for Humanities and Social Science education in Ukraine, while the results of the same experiment for STEM specialties can potentially differ to some extent, due to stronger technical base of such educational institutions and their more close connections with production and business sector.

The check was carried out according to four criteria, namely: the value-motivational criterion of the formation of digital competence of future specialists was evaluated using the method "Diagnostics of values and motives of digital activity", the cognitive one – with "Diagnostics of knowledge, abilities, skills of using augmented reality tools in future professional activity", technological one – with "Diagnostics of the level of technological readiness", reflective – with "Diagnostics of the level of personal and creative readiness of future specialists for professional activity".

The results obtained at the ascertainment stage of experiment are presented in Figure 3.

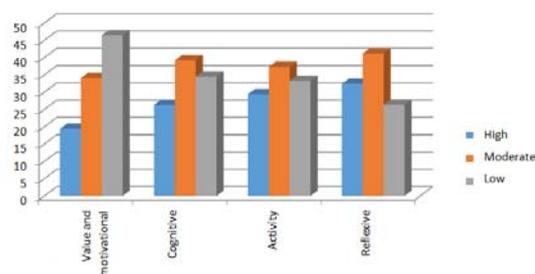


Figure 3. The results of the formation of the readiness of future specialists at the ascertainment stage of the experiment

Based on the obtained data, we can conclude that in the educational process of future specialists, digitalization tools are used mainly at low and medium levels. The main disadvantage of this model is the losing position of the university in relation to industrial partners and the innovation market. Significant distancing from the innovation and labor markets reduces the quality of training specialists in educational institutions. Such a model forms a flawed model of a specialist of the future, who is trained according to outdated educational standards, for existing jobs. This weakens the formation of soft skills, entrepreneurial and lean thinking. Such an approach narrows the funnel of opportunities for the formation of a highly qualified specialist.

Let us describe the digital tools that are proposed to be used during the professional training of future specialists at the Hlukhiv University. We propose to highlight three criteria for the selection of digital technologies in the educational environment of a higher education institution:

- Provision of interactive information action in the learning process;
- Adaptation to the individual characteristics of students;
- The possibility of synchronous or asynchronous interaction of subjects of educational activity [1].

Separated tools include:

1. Google Drive is an online environment where files (pictures, recordings, videos, documents, tables, etc.) are organized, saved, changed, deleted, and added. Files are accessible from any device with an Internet connection, and the changes made are saved automatically. Let us note that this tool can be used in the educational process by a teacher of any discipline (in lectures, laboratory, practical classes). The ability to work through comments allows students to work on assignments synchronously or asynchronously with the teacher, accept or reject the proposed solution, etc. This forces students to study the educational material more consciously.
2. Learningapps is a tool that allows creating interactive exercises. It is a designer tool for the development of various tasks (quizzes, crosswords, puzzles) of different levels of complexity and different subject areas.
3. Cadoo is a tool that allows for collective creation of diagrams and schemes online, simultaneously making changes and discussing work in a special chat.
4. Google Forms – a tool for reflection, creation of the simplest surveys on any topic. It is possible to analyze the results of the survey with the help of spreadsheet tools from Google.
5. Answergarden is a concise tool for organizing instant evaluation of answers, simplifying the process of obtaining statistical data.
6. Mindmeister is a tool for creating mind maps. One can systematize the created maps. New elements (ideas) of the scheme can be highlighted in several ways: font, background color, icon, attaching an explanation to them [1; 3; 11].
7. Google Drive. The advantage is that files are accessible from any device with an Internet connection, and changes are saved automatically. Google Drive includes Google Docs, Sheets, and Slides, an office suite that gives the possibility to collaboratively edit documents, spreadsheets, presentations, drawings, and more. Let us note that this tool can be used in various disciplines (in lectures, practical classes). Students of higher education have the opportunity to process educational material synchronously and asynchronously, analyze it and assimilate it.
8. In the conditions of distance learning, the LearningApps.org service has gained popularity. It is a tool for checking and consolidating knowledge, forming critical thinking. It is easy to use and allows creating interactive tasks of different levels of difficulty: quizzes, crosswords, puzzles, and games. Students can independently create tasks, or they can perform tasks prepared by the teacher. The main advantage of the service is that applications are created exclusively in Ukrainian.
9. MindMeister is a unique tool for organizing group work and reflection. This is a service that allows creating intelligence maps, the use of which in the educational process enables feedback, in particular, through summative and formative assessment. Effective option in the professional training of future teachers is the use of online tools with the help of gadgets. For example, Nearpod is an online tool that allows teachers to create individual assignments and track them using mobile devices. A feature of this service is that users have the opportunity to connect to Nearpod 3D and Nearpod VR.
10. Kahoot is interesting learning game platform that allows creating, playing, opening and sharing fun educational games in minutes.
11. Virtual whiteboards are used to quickly obtain data from students. For example, Padlet is one of the services that allow all participants of the educational process to work together on a web wall, on which one can attach files, photos, links to sites, etc. The wall can be moderated by several participants, while reading and editing access can be open to anyone [27].

In the process of research, it was found that the result of the formation of digital training of future specialists is the formed components of readiness: value-motivational, substantive, activity, and reflective components [17; 23].

Digital technologies allow making the learning process differentiated, building it in accordance with the needs of each individual student, giving tasks that correspond to the level of training and thus improve the quality of education. The use of digital tools contributes to the creation of conditions in which the student becomes an active subject of the educational process. From passive perception, he moves to active actions and is engaged in the performance of tasks.

Indicators of the value-motivational component of the formation of digital competence of future specialists are the motives, purpose, and need for professional training by means of digital technologies; it implies stimulation of the creative expression of a specialist in professional activity, interest in professional activity, the need to improve digital knowledge, interest in working with digital technologies, availability of motivation for digitization in education, and awareness of the purpose of digital activity.

Indicators of the cognitive component of the formation of digital competence of future specialists include: the ability to freely implement digitalization tools in the educational process; availability of knowledge about methods and ways of working with information; knowledge of laws and means of obtaining information, mechanisms of development of means of digital technologies. The level of development of the content component is determined by the completeness, depth, and systematicity of the future teacher's knowledge.

Indicators of the activity component include the ability to practically implement digital technologies; ability to self-improvement and creativity.

Indicators of the reflective component of the formation of digital competence of future specialists are self-awareness, self-control, self-evaluation, understanding of own importance in the team and understanding of the results of own activity, responsibility for the results of own activity, self-knowledge and self-realization in professional activity; it also implies the ability to use acquired knowledge and skills in new and non-standard situations, perform reflective analysis and correction of digital activity.

The pedagogical experiment was implemented at defined stages of the developed technology: value-motivational (assessment was based on the motivational component), content-activity (assessment was based on the cognitive and activity component) and reflective-corrective (assessment was based on the reflective component). The developed technology had the following features of implementation in the educational process: a goal was set for the student and a reward for its achievement was determined; the volume of tasks increased gradually; students received favorable reviews; the competition was a mandatory element in the process of forming the digital competence of future specialists by means of digital technologies.

Thus, the developed methodology contributes to: the organization of an active digital educational environment, the provision of various forms of integrated learning, the monitoring of student development, the improvement of the competence training methodology, in particular, the formation of digital competence of future specialists.

The results of the data obtained at the formative stage of experiment are presented in Figure 4.

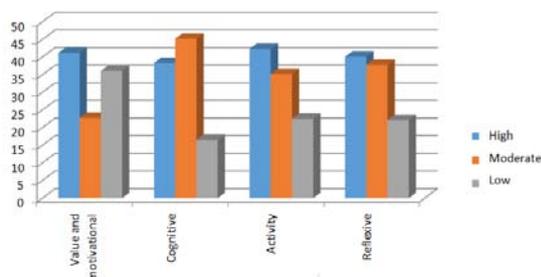


Figure 4. The results of the formation of the readiness of future specialists at the formative stage of experiment

The experimental implementation of the developed methodology indicates positive results of the formation of digital competence of future specialists by means of digital technologies. The use of digital technologies in education had a positive value in determining the final result.

For support and a kind of triangulation of our obtained results, we compared them with the empirical study conducted by Jugembayeva, Murzagaliyeva, and Revalde on the base of Al-Farabi Kazakh National University from April to May 2021 (published in Sustainability journal in 2022). The study for comparison was chosen due to significant similarity of higher educational trends observed on post-soviet space since 1990s, as well as high degree of material and technical base similarity.

After development and implementation of a learning program grounded on the University 4.0 principles, the authors obtained the following result (see Figure 5 and 6 below) [13].

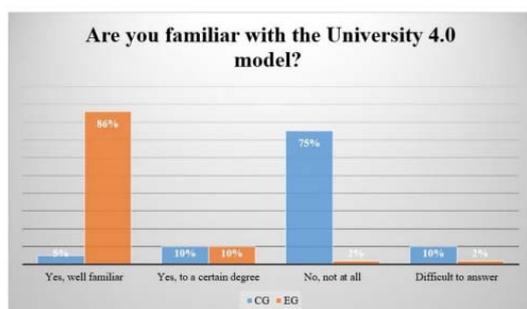


Figure 5. Respondents' answers to the question "Are you familiar with the University 4.0 model?" in the experimental study by Jugembayeva et al. (2021) [13]

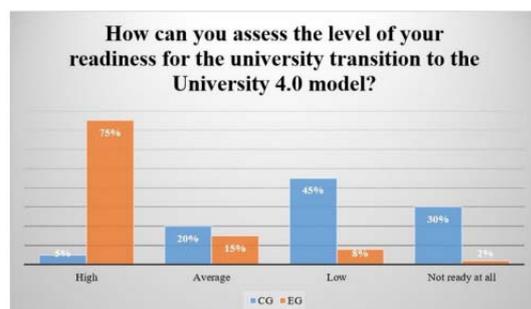


Figure 6. Respondents' answers to the question "How can you assess the level of your readiness for the university transition to the University 4.0 model?" in the experimental study by Jugembayeva et al. (2021) [13]

As evident from the figure, digital tools greatly facilitate students' awareness of digital transformation and readiness for learning and working in digital landscape.

On the basis of the conducted research, several classifications of the levels of readiness of future teachers for the introduction of digital technologies have been identified, namely:

- Adaptive;
- Elementary;
- Partially search;
- Creative and active.

The adaptive level is characteristic of teachers who have a low level of knowledge in general and special disciplines; level is characterized by a lack of independence in educational activities, insignificant training in the field of informatics and information technologies, a weak level of control, self-control and correction of own professional activity, a manifestation of dissatisfaction with the choice of profession, a weak level of awareness of the goals of the formation of professional activity.

The elementary level is characterized by a passive and episodic attitude to professional activity, fragmented and unsystematic knowledge of general and special disciplines, insufficiently formed skills to use existing knowledge for the formation of professional development as a teacher, partial mastery of the basic material on informatics and information technologies, the presence of a need for self-improvement only in the event of difficulties in professional activity, difficulties in the process of planning, control, and self-correction of own professional activity.

The partially search level is characterized mainly by an emotionally positive attitude to professional activity, high-quality knowledge of general and special disciplines, activity in their further mastery, a sufficient level of mastery of informative material, the ability to analyze, systematize, forecast in the field of digital technologies, the ability to evaluate and correct own professional activity, the ability for self-development and self-diagnosis, but not always adequate self-assessment of own capabilities.

The creative and active level is characterized by a clear positive attitude to professional activity, a high level of mastery of informative material and the use of digital technologies in professional education, the ability to systematize, separate, and present material to students with high quality, creatively apply tasks to familiarize future specialists with digital technologies, the ability to find solutions in non-standard situations, a high level of knowledge, the comprehended need for professional self-improvement and personal development, deepening of theoretical and methodical knowledge, adequate self-esteem and a high level of independence.

Achieving a certain level of readiness involves the formation of influence on the individual, the creation of conditions that correspond to his characteristics, while the concept of formation will be considered as the creation of favorable conditions in which the individual will be able to freely choose the content and possible means of further development [3; 9; 12].

Therefore, in order to increase the level of future specialists' readiness for the implementation of digital technologies, it is necessary to define pedagogical conditions for readiness formation:

- 1) Orientation of the basic professional training of the future specialist on the formation of striving, special and methodical readiness of the future specialist to use digital technologies in his further activities;
- 2) Designing and constructing the content of the information education of the future specialist from the elements of the content of his basic training and specially developed training courses, the sequence of study of which is determined according to the stages of development of his focus and training;
- 3) Step-by-step management of the process of forming the readiness of future specialists to familiarize themselves with digital technologies as part of the integral process of their basic professional training [10; 13].

Concluding the examination of the problems of digitalization of education, it should be emphasized that it cannot be qualified unambiguously as a process that by itself will solve all the pressing issues of training future specialists. We believe that in the not-too-distant future, artificial intelligence, digital and robotic systems will liberate humanity from routine, algorithmic and reproductive activities, people who are able to think creatively and critically, tirelessly study and research, and make responsible decisions in situations of increased uncertainty and risks, work creatively and productively in teams of specialists will be in demand. Namely this perspective should direct both the scientific and pedagogical community to new searches in the field of digitization of education.

4 Conclusion

It should be noted that the implementation of digital technologies is very important for the development of the system of higher and professional education, but along with this, it is necessary to form a scientifically based approach to their introduction. A promising education system should be able not only to 'arm' the future specialist with knowledge, but also, due to the constant and rapid updating of knowledge in our era, to form the need for continuous independent mastery of knowledge, abilities, and skills of self-education, as well as independent and creative activities throughout the entire active life of a person. This necessitates the development of digital didactics, or digital pedagogy, which would not only reflect the essence of the ongoing changes, but would also solve applied tasks related to the digital learning process, including psychological aspects. For example, researchers propose the principle of the "generational convention", which implies the rejection of the "presumption of incompetence" of the younger generation, that gives rise to excessive guardianship, reaching the verge of authoritarianism, and does not contribute to the development of such qualities in the younger generation as independence, responsibility, initiative, creativity. The digital format of education should not be aimed at erecting barriers between participants, but at establishing connections between people, helping students not only learn themselves, but also teach each other. The digital format of education is not only an external form, but also a conceptual framework that involves restructuring the concept of higher education within the Industry 4.0, since the digital university itself is the first step in the formation of a 4.0 model university, and along the way solves the problem of developing digital competencies in the process of using digital technologies. In order to prepare students for the future, the content of education should be perspective-oriented, focused on what is still little explored or only manifesting itself, rather than focusing on what is already known and familiar. This does not imply a complete rejection of the known, traditional, but only speaks of the need to shift emphasis, study the new in connection with the existing, and not study the existing without taking into account the future.

Ukraine needs highly professional personnel, so the task of domestic science is not only to borrow the best foreign practices, but also to develop a scientifically based anticipatory educational strategy based on the best domestic scientific schools and advanced digital technologies. The information and educational environment provides unique opportunities for students to acquire knowledge both independently and under the guidance of teachers, which is a rather promising direction for further research.

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