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Gennady Evgenievich Markelov

Candidate of Engineering Sciences,
associate professor,

corresponding member of International
Academy of Theoretical and Applied Sciences,

Bauman Moscow State Technical University,
Moscow, Russia

markelov@bmstu.ru

SECTION 2. Applied mathematics. Mathematical modeling.

MATHEMATICAL MODEL OF A TECHNICAL SYSTEM

Abstract: A mathematical model of a technical system was obtained using a unified approach to building a working mathematical model. The technical system consists of a group of serially connected resistors with temperature-dependent resistance and total heat capacity. The constructed mathematical model possesses sufficient fullness, accuracy, adequacy, productivity and economy. Applying such a model reduces the costs and time spent on research and makes efficient use of the mathematical modeling capabilities.

Key words: working mathematical model, properties of mathematical models, principles of mathematical modeling.

Language: English

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1. Introduction

Articles [1; 2] describe a unified approach to building a working mathematical model that has the desired properties to a degree sufficient for a particular study. Some properties of mathematical models are described in [3; 4]. Article [5] contains an example that describes building a mathematical model that possesses the required properties to a degree sufficient for the study some results of which are presented in [6–8]. The specifics of implementing a unified approach to building mathematical models are discussed in [9; 10].

The aim of this study is to build a working mathematical model of a technical system using a unified approach. The technical system consists of a group of serially connected resistors with temperature-dependent resistance and total heat capacity.

2. Statement of the problem

Let us consider a group of serially connected resistors shown in Fig. 1. These resistors have temperature-dependent resistance and total heat capacity.

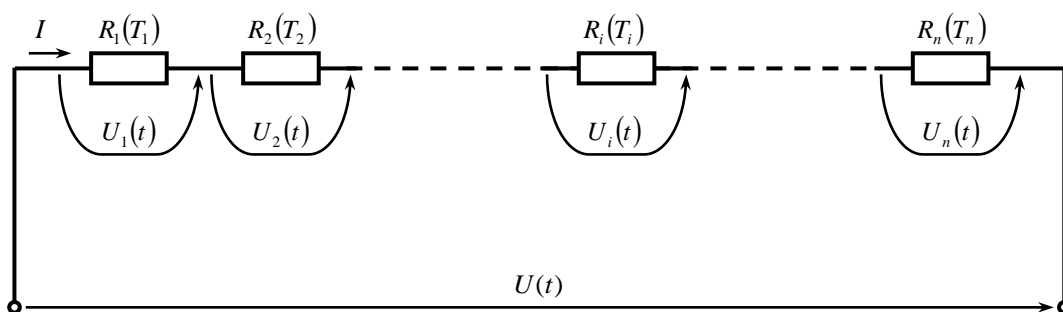


Figure 1 – The group of serially connected resistors.

The i th resistor shall be considered a body with high thermal conductivity, whose temperature T_i at the initial time point t_0 is equal to T_i^0 . The resistor

has the surface area S_i where convective heat exchange with the environment occurs, the ambient

temperature is equal to T_i^0 ; the heat transfer coefficient is known and equal to α_i . Let

$$R_i(T_i) = \frac{R_i^0}{1 + \beta_i(T_i - T_i^0)},$$

$$C_i(T_i) = C_i^0 [1 + \gamma_i(T_i - T_i^0)],$$

where $R_i(T_i)$ and $C_i(T_i)$ are the resistance and total heat capacity of the i th resistor; R_i^0 and C_i^0 are the resistance and total heat capacity of the i th resistor when $T_i = T_i^0$; β and γ are the temperature coefficients, with $\beta > 0$ and $\gamma > 0$. The difference of electric potentials at the poles of the i th element is equal to

$$U_i = \frac{U_i^0}{1 + \beta_i(T_i - T_i^0)}, \quad (1)$$

where $U_i^0 = R_i^0 I$; I is the direct current flowing through the resistors.

Let us assume that the following value is of interest in this study:

$$U_0 = \sum_{i=1}^n U_i. \quad (2)$$

Let us build a working mathematical model of the object of the study which possesses sufficient fullness, accuracy, adequacy, productivity and economy.

3. Solution

To solve this problem, we will use the results described in [11]. These results allow us to construct a hierarchy of mathematical models of the object of the study and determine the conditions under which we can calculate the sought value U with a relative error of no more than the specified value δ_0 .

If the differences $T_i - T_i^0$ and $i = 1, 2, \dots, n$ are sufficiently small, then according to (1) the sought value can be calculated using the following formula:

$$U_0 = \sum_{i=1}^n U_i^0 = \sum_{i=1}^n R_i^0 I. \quad (3)$$

Let us define the conditions under which the resulting formula is applicable. To do this, let us consider steady-state heat transfer. In this case, according to the calculations provided in [11], we can find the steady-state value U_i using the following formula:

$$U_i^* = \frac{2U_i^0}{1 + \sqrt{1 + 4\beta_i I U_i^0 / (\alpha_i S_i)}},$$

then the steady-state value of the sought value is equal to

$$U_* = \sum_{i=1}^n U_i^* = \sum_{i=1}^n \frac{2U_i^0}{1 + \sqrt{1 + 4\beta_i I U_i^0 / (\alpha_i S_i)}}. \quad (4)$$

The following is true for the relative error of U_0 :

$$\delta(U_0) = \left| \frac{U - U_0}{U} \right| = \frac{U_0}{U} - 1 \leq \frac{U_0}{U_*} - 1.$$

Therefore, if the inequality

$$\frac{U_0}{U_*} - 1 \leq \delta_0 \quad (5)$$

is satisfied, we can use formula (3) to find the sought value with a relative error of no more than δ_0 .

When inequality (5) is satisfied, mathematical model (3) has sufficient fullness, accuracy, adequacy, productivity and economy.

Then let us define the conditions under which mathematical model (4) can be applied. To do this, let us consider an unsteady-state heat transfer. In this case, according to the results from [11], we obtain a Cauchy problem:

$$\frac{C_i^0 U_i^0}{\beta_i U_i^2} \frac{dU_i}{dt} = \frac{\alpha_i S_i U_i^0 - \alpha_i S_i U_i - \beta_i I U_i^2}{\gamma_i U_i^0 - \gamma_i U_i + \beta_i U_i}, \quad (6)$$

$$U_i(t_0) = U_i^0,$$

where $i = 1, 2, \dots, n$, and we can find the time point

$$t_i = t_0 + \frac{C_i^0}{\alpha_i S_i} \left[\frac{\gamma_i}{\beta_i} \left(\frac{U_i^*}{U_i^0} - 1 + \delta_0 \right) \frac{U_i^0}{U_i^*} + \left(\frac{U_i^0}{2U_i^0 - U_i^*} + \frac{\gamma_i}{\beta_i} \frac{U_i^0 - U_i^*}{2U_i^0 - U_i^*} \frac{U_i^0}{U_i^*} - 1 \right) \times \right. \\ \left. \times \ln \left(2 - \frac{U_i^*}{U_i^0} - \delta_0 \right) - \left(\frac{U_i^0}{2U_i^0 - U_i^*} + \frac{\gamma_i}{\beta_i} \frac{U_i^0 - U_i^*}{2U_i^0 - U_i^*} \frac{U_i^0}{U_i^*} \right) \times \right. \\ \left. \times \ln \left(\frac{U_i^0}{U_i^0 - U_i^*} \delta_0 \right) \right],$$

for which the following is true:

$$U_i(t_i) = U_i^* / (1 - \delta_0).$$

For $t \geq t_i$

$$\delta(U_i^*) = \left| \frac{U_i - U_i^*}{U_i} \right| = 1 - \frac{U_i^*}{U_i} \leq \delta_0,$$

and U_i^* can be regarded as equal to $U_i(t)$ with a relative error of no more than δ_0 . Let $t_* = \max_{1 \leq i \leq n} t_i$,

then it is easy to demonstrate that for $t \geq t_*$

$$\delta(U_*) = \left| \frac{U - U_*}{U} \right| = \frac{\sum_{i=1}^n (U_i - U_i^*)}{\sum_{i=1}^n U_i} \leq \delta_0.$$

Therefore, formula (4) may be used to find the sought value with a relative error of no more than δ_0 when

$$\delta_0 < \frac{U_0}{U_*} - 1,$$

since otherwise formula (3) should be used.

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If condition (5) is not met, mathematical model (4) possesses sufficient fullness, accuracy, adequacy, productivity and economy when $t \geq t_*$.

Building a new mathematical model when creating a hierarchy of mathematical models for the object of the study may lead to refining the previously determined conditions for the applicability of the constructed mathematical models. Indeed, using mathematical model (2), (6), we can refine the applicability condition for formula (3). For this, we need to calculate the time point

$$t_i = t_0 + \frac{C_i^0}{\alpha_i S_i} \left[\left(\frac{U_i^0}{2U_i^0 - U_i^*} + \frac{\gamma_i}{\beta_i} \frac{U_i^0 - U_i^*}{2U_i^0 - U_i^*} \frac{U_i^0}{U_i^*} - 1 \right) \ln \left(1 + \frac{U_i^*}{U_i^0} \delta_0 \right) - \frac{\gamma_i}{\beta_i} \delta_0 - \left(\frac{U_i^0}{2U_i^0 - U_i^*} + \frac{\gamma_i}{\beta_i} \frac{U_i^0 - U_i^*}{2U_i^0 - U_i^*} \frac{U_i^0}{U_i^*} \right) \times \ln \left(1 - \frac{U_i^*}{U_i^0 - U_i^*} \delta_0 \right) \right],$$

for which the following is true:

$$U_i(t_i) = U_i^0 / (1 + \delta_0).$$

For $t \leq t_i$

$$\delta(U_i^0) = \left| \frac{U_i - U_i^0}{U_i} \right| = \frac{U_i^0}{U_i} - 1 \leq \delta_0,$$

and U_i^0 can be regarded as equal to $U_i(t)$ with a relative error of no more than δ_0 . Let $t^* = \min_{1 \leq i \leq n} t_i$, then it is easy to demonstrate that for $t \leq t^*$

$$\delta(U_0) = \left| \frac{U - U_0}{U} \right| = \sum_{i=1}^n (U_i^0 - U_i) / \sum_{i=1}^n U_i \leq \delta_0.$$

Therefore, formula (3) may be used to find the sought value with a relative error of no more than δ_0 .

If condition (5) is met or $t \leq t^*$, mathematical model (3) possesses sufficient fullness, accuracy, adequacy, productivity and economy.

4. Results

By constructing a hierarchy of mathematical models of the object of the study, taking into account the results described in [11], we can identify a working mathematical model that has the desired properties to a sufficient degree for a particular study. Indeed, if inequality (5) is satisfied or $t \leq t^*$ in the conducted study, then (3) is considered the working mathematical model. If condition (5) is not met, and the time interval from t_0 to t_* may be disregarded in the conducted study, (4) will be chosen as the working mathematical model, otherwise (2), (6) will be the working mathematical model.

5. Conclusion

Thus, a unified approach was used to formulate the statements that allow us to define a mathematical model of a technical system. The constructed mathematical model possesses sufficient fullness, accuracy, adequacy, productivity and economy.

It is evident that using such a mathematical model not only reduces the costs and time spent on research, but also makes efficient use of the mathematical modeling capabilities.

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Azizbek Egamberdiev

Senior teacher at the Department of Social Sciences
Andizhan State University

aziz_botir@mail.ru

SECTION 30. Philosophy.

UZBEKISTAN STEPS INTO INNOVATIVE CHANGE

Abstract: The article discusses innovations in the economic, political and social areas of the Republic of Uzbekistan in the prism of changes over the past year. The active use of innovations in the political field, and the role of reformations for the development of science in the transformation of people's worldview as well as special peculiarities in the introduction of innovations are contemplated.

Key words: innovation, modernization, globalization, strategy of actions, political reformation, virtual reception, public reception, science, innovative culture.

Language: English

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Introduction

Modernization processes in Uzbekistan are rapidly carried out lately. Uzbekistan, on its own way to development, along with national and historical traditions and values, is basing on the advanced experience of modernization processes, progressive and modern technologies and achievements of science in developed countries, in a word, widely-recognized economic-social and scientific-cultural values contributing to the development of our country, are increasingly being introduced into the social life. As a result of the above-mentioned processes, various innovations have been introduced into all areas of social life. The introduction of innovations in Uzbekistan leads to the creation of innovative environment, changes in traditional views among members of society, emergence of innovative thinking and the increasingly innovative nature of society.

The fact that on the initiative of the President of the Republic of Uzbekistan Shavkat Mirziyoev, innovative development has come into start in all spheres of the country confirms our view. The reformations initiated by the President are based upon the motto "The government should serve the people, rather than vice versa" The government encourages the subjects to base their activities on innovative approach, creativity, and apply innovations on a broader scale in all spheres.

Materials and Methods

Under the leadership of the first President of Uzbekistan Islam Karimov, our country gained independence and pursued its own path of political and economic development. Uzbekistan is the fourth largest gold mining country in the world, the seventh on uranium mining, the fourth largest natural gas extraction and the 11th in terms of the width of irrigated lands[1]. The wide-ranging development of market economy in the country, the attraction of foreign investments, the establishment of free economic and dozens of small industrial zones, the development of economic, political, scientific, cultural and other relations with other countries, serve as the basis of the implementation of modernization and innovation processes

Talking of the need for changes in the political life of the country, Shavkat Mirziyoev noted: "The process of further liberalization and reforming of all spheres of society are consistently continuing in our country. Actual problems, no matter what sphere or branch they concern, are openly discussed and solved with participation of the population. All decisions are made taking into account opinions, requests and appeals of our people." [2]

Uzbekistan is trying to become a country of innovations. Reforms in the political arena initiated by our President Shavkat Mirziyoev gained a new meaning. The slogan "The government should serve the people rather than vice versa," which was put forward by our President, has led to the popularity among the authorities and the people and gained the



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trust in and the respect for authority. For example, in September 2017, virtual public receptions were organized. Problems that had been accumulating for many years were not solved by sending letters to traditional central organizations, and it became clear that the citizens were not content with such methods. At the same time, due to the weakness of some of the civil society institutions and the media's work failing to meet the modern requirements and the needs of the people, made it difficult for them to improve the situation.

Now it has been possible for every citizen to be directly connected to the virtual reception of the leader of the country through telephone or the Internet, inform them about their problems and get practical assistance in solving them. At such an urgent period, there was a need in an innovative approach to the problems that were to be solved in society. The problems of the population came to be solved within the framework of the existing law without introducing any changes to them. During the short period of time, the Presidential virtual reception has been so popular that on July 21, 2017, the 1 millionth caller to the Virtual Reception of the President of the Republic of Uzbekistan was registered.[3]

At present, dealing with petitions by citizens in Uzbekistan has become a priority, and there is an innovative approach to any issue about it. In particular, the introduction of the President's advisory service dealing with the problems of the population and the organization of public receptions in each region and district, as well as the newly adopted laws in this area are vivid examples for the issue.

In addition to the foregoing, innovative approaches are being implemented in such areas as human rights, freedom of speech and conscience, social rehabilitation of citizens who are exposed to religious extremist organizations.

Representatives of people who were convicted on religious extremism, but remaining outside the boundaries of social relations were putting the sustainability at risk. The work that is being carried out in this direction now also has a completely new meaning. The right path to the fight against religious extremism would be appropriate if it is implemented through absorbing true Islamic values and culture into the minds of people, and especially in the minds of young people.

The President Shavkat Mirziyoev also offered a unique approach to solving the problem stating as follows: "It is not enough to remove those who have strayed from the right path from the list. They need to be provided with practical support, decent work, cheap loans, and housing. In order to bring these people back to healthy life, this affair should be approached reasonably, with enlightenment and delicacy, and primarily serving as a role model since

they are also citizens of Uzbekistan. At same time, they should never forget that along with the same rights and freedom as the citizens of Uzbekistan, they have responsibilities and duties as well ".[4]

In tackling the problem as religious extremism, it is emphasized to focus not only on the use of force, but also on education and religious knowledge of people. For this purpose, the Islamic Cultural Center in Uzbekistan, the Samarkand International Research Center named after Imam Bukhari, and the madrasahs teaching Islamic knowledge in each region have been assigned to be established Shavkat Mirziyoev highlighted this aspect in his speech at the UN General Assembly: "Islam calls us to kindness and peace, preservation of a genuine human beginning".[5]

Modernization of the economy, further development of market relations and further introduction of innovations in these processes, regular introduction of innovative technologies and techniques into entrepreneurship are important actors determining the economic independence and development of the country. In this regard, some work is being done to meet the spirit of the current period. Particularly, the responsibility for business activities and the responsibility for illegal investigations has been intensified Vacant buildings, which were actively used in the former Soviet Union period, were provided free-of-charge(with a zero value) for entrepreneurs on condition they make an investment.

Special attention by the President is being paid to the issue of creating favorable conditions for business entities in the country for further development of entrepreneurship. These may be confirmed by the following said by Shavkat Mirziyoev: "...an entrepreneur is a real devoted human. Personally, I am ready to praise to the skies the businessman who created just two workplaces".[6]

The abnormal regime of currency exchange in economic life has been a major obstacle to the entrepreneurial activity. From September 2017, the head of the state has started buying foreign currency from the citizens of the largest country of Central Asia, with a population of 32.5 million. Also, the sale of foreign currency to citizens' conversion cards has begun. The foreign currency in the hands of the population was largely sent by the migrants abroad as a whole, and the entire illegal system that was formed with the exchange of it to the national currency has thus been eliminated.

It is possible to say that introduction of new methods of work in this area, new approach, organization of activities on a creative basis, in short, introduction of innovations became an important impetus for the development of entrepreneurship. As Shavkat Mirziyoev highlighted at the 72nd session of the United Nations General



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Assembly, the Ombudsman for the protection of the rights of entrepreneurs was introduced in our country for the first time. Taxes on the business sector have been dramatically reduced, and credit opportunities have been expanded. The new free economic zones, where investors were given wide range of privileges, have been created,

Cooperation with international financial institutions is successfully developing, and we have re-established partnership relations with the European Bank for Reconstruction and Development.[7]

Taking into account that science is the driving force of the economy in Uzbekistan, a number of measures are being taken. The innovative approach to this is primarily the science and thus the desire for the implementation of the economy is increasing. The President's approach in this regard is also unique, and, according to him, this approach should be carried out through a new look at the heritage of the great ancestors of the Uzbek people and the pursuit of the future.[8] For example, in September 2017, a specialized school for the deepening of knowledge in the field of information and communication technologies named after Mirzo Ulugbek and the Astronomy and Aeronautics Park and the M. Al-Khorezmi International Specialized School were organized.[9]

Today in Uzbekistan there are more than 300 scientific-research institutions, scientific-production enterprises and innovation centers. Over the past year, new scientific and innovative structures - the Center for Genomics and Bioinformatics, the International Solar Energy Institute, the High-Tech Center, and the Uzbek-Japanese Youth Innovation Center have been set up. In all these centers, Uzbek youths are conducting joint research with scientists from countries such as South Korea, Japan, the United States and the United Kingdom.

Recently, the issue of educating young people on the basis of innovative development in the country, whether it is a science or entrepreneurship, and the formation of new approaches in their minds is raised. For example, in accordance with the Decree of the President of the Republic of Uzbekistan "On measures to further strengthen the infrastructure of scientific research institutions and develop innovation activities", targeted quotas for doctoral studies have been given to provide the necessary conditions for wide involvement of talented youth in scientific research and it was planned to strengthen the mechanisms for the academic mobility of academic staff and support their scientific advancement.[10]

The Mirzo Ulugbek Innovation Center was established to encourage young scientists who are able to find innovative solutions. Residences of the center have been granted extensive privileges. The Innovation Center has all IT professionals in the

country, who have been provided with a decent working environment and promising jobs. In addition, the Yashnobod Innovative Technopark was built and it is planned to carry out innovative researches, implementation of foreign modern and local technologies in the Uzbek manufacturing enterprises. It is also planned to establish leading industrial and small innovative enterprises for the production of high-tech, competitive products in the domestic and foreign markets.

All such changes are carried out within the framework of the Strategy adopted by a nation-wide discussion and every year the government has been attracting citizens to develop its own action plans. In particular, at the end of 2017, citizens will be able to make suggestions on what reforms should be undertaken by public authorities next year.[11]

The innovation process has its own complexities. At any stage, there are those who resist it and who cannot change traditional views. In such a situation, free worldview, open, equitable and direct dialogue with the world community will help to change people's minds and support progressive reforms. People need to be free to understand the essence of their problems. Only then can they make an objective look at their lives. Uzbekistan has chosen the innovative way to implement reforms is a reflection of the fact that bureaucratic approach has been abandoned and it is seen in the clear, relevant activities of the population. Taking into consideration the level of living standards, knowledge and outlook of the population, the necessary conditions for the adoption of modern innovations are created.

Conclusion

In fact, the desire for change, the emergence of modern, innovative needs mean the commencement of all the positive achievements and people's motives to look for modernization and innovation. The fact that people in Uzbekistan have a new, free worldview can lead to the emergence of their intellectual potential, their abilities and talents. This process, in turn, gives a strong impetus to the success of the ongoing reforms in society. As a result, modernization and innovation processes in Uzbekistan will grow faster.

As globalization is gaining momentum in the world, Uzbekistan is becoming an active participant of these processes. Globalization requires both comprehensive modernization of the country and making decisions on the basis of innovative approaches. No other way is certain to exist. Avoiding such a path leads to the isolation of the country from the world community. It is difficult to imagine the future of the country without the advent of innovative technology. Therefore, by applying innovation in all areas of society, it is possible to



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achieve the prosperity of the country and take a

decent place among the developed countries.

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Vasyly Vasylyovych Soloviy

PhD student

Institute of Philology, Taras Shevchenko National

University of Kyiv

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POSTMODERNISM AND UKRAINIAN POETRY, 1990 – 2010

Abstract: The article studies the influence of postmodernism on Ukrainian poetry, 1990 – 2010. The paper proves the idea that postmodernism as a philosophical phenomenon was not fully embraced by Ukrainian poetry of the given period and thus delimits the notions of “postmodernism” and “postmodernity”. The author argues that although Ukrainian poetry of 1990 – 2010 was not able to comprehend the aesthetics of Postmodernism, it widely uses its literary devices.

Key words: postmodernism, postmodernity, poetry, poem, contemporary Ukrainian literature.

Language: Russian

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ПОСТМОДЕРНИЗМ И УКРАИНСКАЯ ЛИРИКА 1990 – 2010-х ГОДОВ

Аннотация: В статье анализируется влияние постмодернизма на украинскую лирику 1990 – 2010-х годов. Автор статьи полагает, что постмодернизм как мировоззренческий феномен не был полностью освоен украинской лирикой этого периода. В исследовании размежевываются понятия «постмодернизм» и «постмодерность», утверждается, что украинская лирика 1990 – 2010-х годов не была способна всецело усвоить эстетику постмодернизма, но пользуется многими его приемами.

Ключевые слова: постмодернизм, постмодерность, стихотворение, лирика, современная украинская литература.

Introduction

В Украине термин «постмодернизм» пользуется большой популярностью, особенно в контексте разговоров о современной поэзии. Желание ученых свести к общему знаменателю множество индивидуальных творческих писательских методов, приемов, актуализируют поиски единого на сегодня творческого направления по аналогии к предыдущим литературным эпохам – романтизму, классицизму, модернизму и т. д. Подобные поиски всегда вызывают череду дискуссий, главным образом в желании осмыслить национальную, собственно украинскую модель постмодернизма.

Materials and Methods

В разное время постмодернизм в украинской литературе вошел в круг интересов авторитетных

украинских ученых. Уже хрестоматийными для украинского литературоведения стали работы Т. Гундоровой «Послечернобыльская библиотека» [1], С. Павлычко «Дискурс модернизма в украинской литературе» [6], Н. Зборовской «Код украинской литературы» [10], Л. Лавринович «Постмодернизм в украинской, польской и российской прозе: типология образа-персонажа» [5], И. Старовойт «Украинский постмодернизм в критическую и художественном дискурса конца XX века» [8].

Сейчас уже очевидным становится факт излишней поспешности в определении постмодернизма как доминирующего направления современной литературной эпохи. В Англии, как и во Франции, принято различать и не путать между собой термины «постмодернизм» и «постмодерность» [1, с. 224].



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Таблица 1

Сравнительная таблица «модернизм-постмодернизм» по Брайнину-Пассеку

Модернизм	Постмодернизм
Скандальность	Конформизм
Антимещанский пафос	Отсутствие пафоса
Эмоциональное отрицание предшествующего	Деловое использование предшествующего
Первичность как позиция	Вторичность как позиция
Оценочность в самоназвании: «Мы — новое»	Безоценочность в самоназвании: «Мы — все»
Декларируемая элитарность	Недекларируемая демократичность
Преобладание идеального над материальным	Коммерческий успех
Вера в высокое искусство	Антиутопичность
Фактическая культурная преемственность	Отказ од предыдущей культурной парадигмы
Отчетливость границы искусство-неискусство	Все может называться искусством

Если первый означает собственно литературную (мировоззренческую) эпоху вообще, что пришла на смену модернизма, то «постмодерность» позволяет говорить только об отдельных проявлениях постмодернизма в искусстве вообще и литературе в частности. Ни социальная, ни культурная сферы в Украине, главным образом по причине уникального исторического пути этой страны, с самого начала не были способны полностью освоить постмодерную эстетику. Украинская литература XX века, оказавшись под внешним идеологическим давлением, оказалась неспособной логично полностью поглотить модернизм, до полного отторжения, что, напомним, и стало в европейской культуре причиной возникновения постмодернизма.

Обратим внимание на сравнительную таблицу модернизма и постмодернизма Брайнина-Пассека [3], попробовав осмыслить ее именно с позиции украинской литературы (табл. 1).

Фактически, такие определители как «скандальность», «вера в высокое искусство», «декларированная элитарность», «преобладание идеального над материальным», «антимещанский пафос» лучше и точнее характеризуют современный украинский литературный процесс.

Украинская современная литература признает за собой и «культурную преемственность», открывая ряд искусственно умалчиваемых имен XX в., наследуя литературные тенденции 20-30-х годов XX ст. Глубокая ревизия литературного наследия последних лет в Украине определена

переосмыслением канона, а не полным его отрицанием. В этом контексте украинские писатели не готовы и стереть «отчетливость границы искусство-неискусство», более того, в литературных дискуссиях, попытках отстоять самобытность творческого стиля, эстетическая ценность произведения часто становится едва ли не главным камнем преткновения. Особенно заметным является тот факт, что бунт украинских писателей 90-х годов (Бу-Ба-Бу, «Новая дегенерация», Лугосад) был направлен не против модернизма, а против социалистически враждебных модернизму догм в литературе. Уже в этом, кажется, и состоит главная причина того, чтобы мы могли говорить о современном литературном направлении не только в контексте постмодернизма, отбрасывая тенденциозность в попытках мгновенно ввести нашу литературу в общеевропейский контекст.

Однако сказанное не касается постмодерности как ряда приемов, заимствованных украинскими писателями у постмодернизма и адаптированных к собственным потребностям, где главными являются именно формотворческие искания. «Так, важной чертой литературного процесса последних десятилетий, — по наблюдениям Галины Бабак, — стало разрушение логоцентричности и нивелирование устоявшейся иерархии жанров в рамках постмодернистической традиции, жанровая и стилевая диффузия дала возможность говорить о «переходных» литературных формах и поставила

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под сомнение четкие границы между поэзией и прозой, сводя все к понятию текста...» [2].

Главные приемы, по Т. Гундоровой, украинского постмодернизма, ирония и стилизация, особенно распространены в конце 80-х – в начале 90-х годов, постепенно в литературе переживают смену функций [4, с. 105].

Необходимые для раннего постколониального дискурса как инструменты борьбы с каноном, они становятся практически не нужными, вторичными в начале 2010-х годов, в период активных попыток выхода украинского писателя на европейский рынок и читателя, которому внутренние проблемы украинского общества – малопонятны и малоинтересны.

Такая тенденция хорошо заметна в процессе наблюдения трансформации творчества многих украинских писателей 90-х годов, среди которых Юрий Андрухович, Иван Андрусак, Сергей Жадан. Ирония и стилизация в большинстве случаев современной литературы имеют характер развлекательный, попыткой обратить внимание массового читателя.

Постмодерный дискурс, который возник в Европе 50-х годов через поэтические декларации поэтов объединения L=A=N=G=U=A=G=E, куда входили Чарльз Олсон, Чарльз Бернштейн и др., провоцировал к переходу на создание постмодерной поэзии, главной чертой которой является оппозиция поэзии лирической [1, с. 225]. Отрицая лирическую поэзию, поэты-постмодернисты планировали покончить с традиционным представлением о стихотворении «как о сосредоточенный на себе и самодостаточный факт искусства»: «Постмодернистическое стихотворение очень отличается своим видом от традиционного стихотворения (то есть страница не содержит в себе аккуратно сделанного поэтического факта, а является скорее тем местом, где поэт работает с какой-то конкретной темой): постмодернистическое стихотворение – это пастиш из прозы, цитат и поэтических строчек, которые черпают свой смысл из широкого диапазона интересов и тем, а поэт-постмодернист размещает на певром плане тот факт, что поэтическое произведение (как и сам поэт) вплетен в сеть связей с другими текстами идеологией, жанрами и поэтами. Поэт-постмодернист стремится продемонстрировать, что поэзия – это не просто передача отдельного, единичного опыта; это скорее гетероглоссная конвергенция идеологий, дисциплин и голосов» [1, с. 224].

Известно, что такое понимание поэзии в европейской постмодерной литературе возникло в 50-х годах XX в. вследствие

послевоенного социального кризиса. «Общественное и этическое сознание, – говорится в «Энциклопедии постмодернизма», – теперь не может позволить себе такую роскошь, как существование аполитического эстетического объекта, так как пренебрегать важные социальные и политические измерения любой деятельности человека означало бы увековечить обезличивание и дегуманизацию, которые сделали геноцид возможным» [1, с. 226]. Изложенное утверждение является важным для понимания сути возникновения постмодернистической поэзии и задает другой важный вопрос – органичного бытования литературного стиля в контексте исторической эпохи. Авторы статьи «Постмодернизм как литературное явление: развитие и критика» К. А. Ткач, И. С. Миронова в качестве примера постмодернизма в украинской поэзии берут во внимание творчество Э. Андиевской, Р. Бабовала, С. Гостиняка, называя таким образом основными творцами украинской постмодерной поэзии авторов из диаспоры, которые принадлежат к литературному поколению 60-70 гг. [9].

На территорию собственно Украины постмодернизм как эстетическое явление пришел с большим опозданием. Более чем за полувековую историю своего существования на Западе этот мировоззренческий феномен стал интересным для украинских писателей по причинам, которые не требовали понимания сути возникновения постмодернизма. Украинская современная литература в 80-90-хх гг. XX в., избавившись от соцреалистических канонов, остро требовала новых форм и приёмов для выражения. Именно в это время в широкий обиход в поэзии попадают такие постмодерные приемы как коллаж и монтаж [6, с. 29]. На их основе значительно возрастает бытование верлибра, который в 2000-х годах станет доминирующей формой поэзии.

Однако украинские поэты оказались не готовы к полному восприятию крайностей постмодернизма, в том числе отречению от индивидуального опыта, авторской оригинальности, собственной первичности что касается создания текста. Оппозиция «постмодернистская поэзия – лирика» оказалась же отнюдь не жизнеспособной на украинской почве. Литературная ситуация 90-х годов, в том числе общественное невнимание к писателям, игнорирование литературного процесса, не требовали отвержения субъективного лирического начала, которое является основой лирики, а, наоборот, побуждала к нему. Принцип интертекстуальности в украинской поэзии –



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это последствие диалогичности, попытка причислить себя к определенному интеллектуальному контексту, но не предусматривает растворения писательского «Я» в совокупности заданных цитат.

Полного осмысления явления присутствия постмодернизма в украинском культурном пространстве у нас до сих пор не произошло. Как сознаются авторы уже упоминаемой статьи «Постмодернизм как литературное явления: развитие и критика», «Постмодернизм сегодня – это культурологический феномен, смысл и терминология которого пока что не выяснены достаточно. Как правило, литературный процесс для большинства современников представляется хаотичным в той или иной мере. Это касается любой литературной эпохи. Поэтому неслучайно, что в начале XXI в. определенной мерой хаотичной кажется и литература постмодерна» [9].

Conclusion

Учитывая сказанное, оперируя термином «постмодерная поэзия», в первую очередь стоит подразумевать такую поэзию, которой

свойственна «постмодерность», то есть ряд признаков и приемов, заимствованных украинскими поэтами из постмодернизма. Считаем, что вполне уместным будет размежевание понятий «постмодерная поэзия» и «поэзия постмодернизма», хотя бы учитывая реалии и специфику современного литературного процесса. Вопрос «присутствия» постмодернизма как культурного феномена в украинском литературном пространстве определенно будет иметь утвердительный ответ, однако формы этого присутствия в полной мере, к сожалению, до сих пор не осмыслены.

Отсутствие признаков, которые дали бы основания говорить об украинской литературе в контексте единого культурного направления, свидетельствуют в первую очередь о том, что современная украинская литература все еще находится на переходном этапе развития. Писатели, особенно поэты, которые ищут новые формы и эстетические ориентиры, стремясь к оригинальности, именно сейчас открывают новую эпоху в нашей художественной литературе.

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Bakhodir Bakhronovich Mardonov
the teacher of
Samarkand branch of Tashkent
University of Informational Technology

**SECTION 31. Economic research, finance,
innovation, risk management.**

SOME THEORITICAL PROBLEMS OF SERVICE SECTOR

Abstract: *There is given in this article some theoretical problems of the service sector, which are waiting to be solved and shown the ways of solving these problems, analyzed the definitions of which are given in the category "service". Also, the role of the service sector in the socio-economic life of the country has been thoroughly studied and new aspects of this sphere are shown.*

Key words: *income, employment, service, demand, consumer, offer, market economy.*

Language: *English*

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Introduction

In the highly economically developed countries of the West service sector has become a superior advanced, primary sector of the national economy. In Uzbekistan, the service sector has also grown rapidly, with its share of the gross domestic product more than 50 percent over a short period of time. In the Movement Strategy adopted for the further development of Uzbekistan a particular attention is paid to this issue.

Theoretical aspects of the service sector play an important role in determining the potential in the development of the country's socio-economic life. However, many issues related to the functioning and development of the service sector, including its role in the information society, the leadership role of it in the key activities of human economic activity have not been thoroughly studied. But up until now in the research works the essence of the concept of "service", its definition recognized by many, the role of the service sector in the socio-economic development of the country has not been fully covered. Therefore, there are some theoretical issues in the service sector that are waiting for the solution.

F. Kotler considers that "services are any activities or blessings that can be offered from one side to the other side, a useful action that does not allow any party to own something" [1]. R.Normann - gives the definition "Service – is a benefit offered to the customer" [2]. T.A.Agapova, S.F.Seregina believe that "services are related to the non-material sector and are different kind of activities of a person

who does not create material goods" [3]. K. Lavlok, in contrast to the above-mentioned scientists' definitions, "includes to the concept of services all kinds of activities which manufacture resources for industrial and agricultural purposes" [4]. Similar definitions can be found in the works of foreign scientists such as Z.I.Belikina[5], E. A. Razomasova[6], T.D.Burmenko[7], O.V.Koneva[8], L. Demidova[9], V.N Solovyova[10] and others. However, they did not fully explain the role of the sphere of services in socio-economic development of the country. In the current literature and in scientific research, the role of service sector in shaping the country's GDP, providing employment to the population and a number of its other aspects has been recognized.

Main part

In current economic literature, which contain theoretical studies shows that there are a series of definitions of different content on service and service sectors. Consequently, since there is no unity in interpretation of the concept of "service" and in revealing its socio-economic significance, there are various, often contradictory scientific views and approaches on a number of important issues.

While a group of economists consider service and service concepts as independent considerations, many scientists see them as synonymous. For example, some economists in their works have acknowledged that, the sphere of services has an important socio-economic value in the national



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economy complex. Some economic schools' representatives (Kronrod Ya.A, Skarjinsky M.I and etc.) have suggested that the material production should be expanded by reducing service sector [11]. The scientific debates about the division of the economy into production and non-production sectors, recognition some of its network as transportation and communication according to what kind of type they are, has not come to an end and there is no points in these important issues. For example, G.A. Dremina, N.M. Lisovaya and others added light vehicles to the sphere of services, as well as trucks to manufacturing industry [12].

In our opinion, it is impossible to achieve exact results when calculating the scale of the sphere of services, its status and dynamics of development, unless there is a consensus among economical scientists. We found it necessary to explain some of our considerations and approaches in these important issues. In our view, if we look at the "transport and communication" sectors of the economy from a consumer point of view, whether it is a cargo carrier transport or a passenger carrier transport, it will be a part of the service industry. Because it ends with the activity of bringing the consumer to his destination and with solving his problems. If we look at it from an enterprise perspective, it is a means of production for the enterprise. Because in the formation of the value of the goods, transportation costs are reflected as an expense incurred therein, and they are included in the cost of the product. The services, their essence and importance, can be further extended. The views about services, their essence and importance, can be further extended. Recognizing the theoretical significance of scientifically grounded comments in these economic views, we consider that it is not appropriate to look to it from the consumer point of view. Because in the market economy, consumer is a royalty, and his desires, appear to be the driving force of all market participants. Economic activity of all business entities is based on the interests of the consumer and serves to satisfy it. Looking at the service sector from a consumer point of view gives an opportunity to clarify the views on the nature of this industry, its socio-economic role and place. It is noteworthy that in the evaluation of the essence of the concept of "service sector", in giving the definition to it, in evaluating the position of the service sector in the national economy, based on the interests of the consumer, acknowledging the importance of its primary importance, will make it easier to clarify many debates and controversy on the subject. However, in none of the above-mentioned economists' findings on the definition of "service" the interests of consumers have been reflected. From that point of view, the following description can be given to the category of "service": "Service" - is a general category and it considered to be an activity, aimed at satisfying the needs of consumers (to

alleviate their difficulties, to bring closer to their destination, to solve their problems) and maintaining their interests.

Conclusion

The role of the sphere of services in the socio-economic life of the country has not yet been thoroughly and comprehensively investigated. Theoretical research shows that there have been formed many different, often controversial views on the role of the service industry in the national economy. D.M.Dalagatova, a Russian economist, in explaining the role of the sphere of services in the country's economy, from our point of view, based on some of the less important aspects of service sector. In her opinion, this sector will, firstly, reduce the amount of government financing, and secondly, it will increase competition between business entities, and, thirdly, will result in creating new types of services[13]. In our perspectives, the opinions expressed by the author are not sufficient to explain the role of the service sector in the national economy and in the life of society. While the sector of services participates in the strengthening of inter-sectoral competition, it is illogical to justify the valuation of its position in the economy based only on this. Today, when the sphere of services is becoming a leading, primary sector of the national economy, its role will not only be reflected in the strengthening of competition between economic entities or, say, the reduction of government funding. The sphere of services today is primarily a means of satisfying the needs of the population, the main means of its survival and development, and secondly, the primary sector in the formation of the gross domestic product, thirdly it has a great potential to address the problem of employment of the population. Recognizing the important role of the service sector in the life of the community and in the national economy, a Russian economist A.N. Guseva in her scientific work called "Improvement of the mechanism of management of service organizations in the market" emphasized that the development of the services sector has allowed women to reduce their "housework" and to increase their leisure time. As a result, numbers shows that in Russian Federation, the share of women in the economy is 51 percent, in education - 70 percent, in health and social services - 80 percent, and in trade and public catering - over 40 percent [14]. N. V. Vaselenko and I.V. Vengerova in their research, describe the role of the services sector in the national economy in the following way:

- technological changes will take place in the economy of the country;
- there will be an increase in productivity of social production;
- national economy will be provided with qualified labor resources;



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- centers for maintenance of complex types of technologies will be opened[15].

In most of the investigated researches the role of the sphere of services in the creation of new job places, increasing the GDP of the country, increasing incomes of the population and in improving the living standards of the population have been recognized. Some textbooks in evaluating the role of the services sector in the economy its economic and social functions were taken as a basis. The views of scientists about the role of the sphere of services in the economy are remarkable. In their works, they have covered in detail the role of the sphere of services in the economy. However, in our opinion, the social and economic significance of the service sector is not limited with those factors. As a proof of our this theoretical conclusion we can give these consideration:

Firstly, the sphere of services participates in meeting the requirements of a number of economic laws. For example, the law of time saving.

Secondly, the service sector plays an important role in addressing such issues as implementation of

the policy of modernization of the economy, the development of scientific and technical and innovative processes in the economy, the introduction of advanced techniques and technologies.

Thirdly, the service sector plays an important role in reducing inflation rates in the economy and establishing healthy monetary circulation. At the same time, it is possible to reduce the inflation rates by providing excess money in circulation with services.

Fourthly, the service sector plays an important role in increasing the revenues of the state budget and forming its revenues.

Fifthly, the service industry improves market infrastructure.

Sixth, the services sector has wide opportunities for the formation of population incomes.

Seventh, the role of the services sector in the spending allocation of gross income of consumers to consumption expenditures and savings is of great importance.

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Dilfuza Sayidmahamadzhanovna Saiidyrakhimova
Candidate of Philology, Docent
Head of the Department of English Philology,
Kyrgyz-Uzbek University,
Osh city, Kyrgyz Republic
ossu.oms@gmail.com

Dilbar Mamatovna Zhakypova
Postgraduate student of the Department of
English Philology,
Kyrgyz-Uzbek University,
Osh city, Kyrgyz Republic
ossu.oms@gmail.com

SECTION 29: Literary studies. Folklore.
Translation.

GENERAL THEORETICAL ASPECTS IN SYNCHRONICAL TYPOLOGICAL LEARNING OF ENGLISH ADVERBS

Abstract: Questions of the parts of speech (further PS) - among the central problems of the theory of grammar. The study of the problems of the PS has its deep historical history (from the ancient times of the history of linguistics). Despite this, many of the theoretical problems of the PS have not yet been fully developed. Differences of scientists are observed even in the classification of the PS. Unambiguously, there are no specific places for individual lexical and grammatical categories in the general system, one of them is an adverb - "a hybrid category, like gerund and participle" (V.V. Vinogradov).

Key words: parts of speech, classification, hybrid category, gerunds, lexico-grammatical category, state actions.

Language: Russian

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ОБЩИЕ ТЕОРЕТИЧЕСКИЕ ВОПРОСЫ СИНХРОННО ТИПОЛОГИЧЕСКОГО ИЗУЧЕНИЯ ЯЗЫКОВЫХ ЯВЛЕНИЙ

Аннотация: Вопросы частей речи (далее ЧР) - в числе центральных проблем теории грамматики. Изучение проблем ЧР имеет свою глубокодавнюю историю (с античных времен истории языкознания). Несмотря на это, многие теоретические проблемы ЧР до сих пор не вполне разработаны. Разногласия ученых наблюдаются даже в классификации ЧР. Однозначно не определены собственные места отдельных лексико-грамматических категорий в общей системе ЧР, одной из них является наречие - «гибридная категория, наподобие деепричастия и причастия» (В.В. Виноградов).

Ключевые слова: части речи, классификация, гибридная категория, деепричастия, лексико-грамматическая категория, действия состояния.

Introduction

Наречия данной семантической группы обозначают цель совершенного (завершенного) или не совершенного (незавершенного) действия-состояния, которые представляются в обоих языках в малом количестве.

Materials and Methods

В узбекском языке система наречий цели состоит из слов *атай*, *атайин*, *атайлаб*, *жўрттага*, *азза-базза*, *қасддан*, заимствованных узбекским языком из таджикского. В таджикском языке наречия цели, кроме слова *қасддан*,

являются производными, образованы посредством суффикса *-и* (нодони); префиксов *бе-* (бехуда, бедарак), *бар-* (барқасд), некоторые из них путем редупликации: *дида-ю дониста*, *дониста-ю нодониста*, *бемавриду+бомаврид*.

Наречия цели *лутфан*, *таъкидан* заимствованы в таджикский язык из арабского. Следует отметить, что некоторые наречия в сопоставительно изучаемых языках являются многозначными. Например, наречия типа *бехуда*, *бедарак* употребляются и в значении цели, и в значении образа действия. Например, слово *бедарак* в предложении *Уруи вақтида кўн*



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йигитлар бедарак йўқолди обозначает не цель совершения действия, а образа действия совершения действия –состояния. Подобная же особенность наблюдается в употреблении слово *ноилолч* в таджикском языке.

Итак, и семантический план наречий представляет собой своеобразную систему, что характерно для категории наречий и узбекского, и таджикского языков.

1. Части речи являются одной из дискуссионных и актуальнейших проблем языкознания. Изучение вопросов частей речи имеет свою глубокую историю, являлись объектом науки о языке с античных времен (древнеиндийское, латино-греческое, арабское языкознание). Однако отдельные вопросы, связанные с проблемами ЧР остаются не решенными и ныне наблюдается неоднозначность даже в их классификации.

Неоднозначны точки зрения специалистов и в отношении лексико-грамматических категорий общей системы ЧР, одной из которых является лексико-грамматическая категория наречия.

Наречием образуются признаки и качества действия, состояния. Признак и качества – значения общеграмматическое, свойственные и другим лексико-грамматическим категориям системы ЧР. С точки зрения обозначения признаки, качества к наречиям приближаются лексико-грамматические категории прилагательных и глаголов. Значение признака, качества обозначают и отдельные существительные типа *гишт*, (*гишт девор*), *темир* (*темир дарвоза*), *кумуш* (*кумуш қошиқ*) и т.д. Однако это не значит, что семантические планы наречия, прилагательного, глагола и отдельных существительных не отличаются друг от друга. Все они отличаются друг от друга в отношении характера обозначаемых ими значениями. Так, наречием обозначаются признаки и качества действия, состояния; прилагательным - признаки и качества предмета, явления; глаголом - признаки и качества предмета и движения, действий. Значения наречия - это признак, свойства признака состояния. Значение прилагательного - признак, свойство статического (недействующего) характера, а значение глагола - признак процессуальности, динамического характера. В чем и заключаются различия между семантическими планами наречия, прилагательного и глагола.

Наречия в грамматико-семантическом плане наиболее близки к прилагательным. Но это не значит, что они не различимы друг от друга. Наречие в семантико-грамматическом плане зависимо от глагола, а прилагательное-от существительного. Значения наречия или прилагательного реализуются синтагматическим окружение, в котором в качестве партнеров

наречия выступают глаголы, а партнерами прилагательных выступают существительные.

Таким образом, реализация всякого значения, и семантического, и грамматического плана, зависит от синтагматической особенности лексем. Синтагматические возможности глагола осуществляются при их связи с существительными. Значит, значение глагола зависит от значения существительного, которое реализуется через предикативную конструкцию.

2. Грамматические значения первоначально бывают абсолютно гетерогенными и абсолютно гомогенными; первое из них характерно для имен существительных, а второе для наречий. Между гетерогенными и гомогенными грамматическими значениями функционируют и значения для других, кроме существительного и наречия, знаменательных частей речи. В промежуточных грамматических значениях синхронно-синкретично совмещаются признаки и гетерогенных, и гомогенных грамматических значениях, которые не характерны для грамматических значений существительного и наречия. Отсюда ясно, что промежуточные грамматические значения - это грамматические значения прилагательных, глаголов, которые могут называться гетерогенно-гомогенными значениями.

Гетерогенно-гомогенные грамматические значения характеризуются тем что они являются гетерогенными, а также и гомогенными по отношению к грамматическим значениям других лексико-грамматических категорий. Так, например, грамматическое значение прилагательного - гомогенное значение отношении грамматического значения имени существительного, а гетерогенное оно в отношении грамматического значения наречия. Подобную же характеристику имеет и в грамматическое значение глагола. Грамматическое значение глагола является гомогенным в отношении грамматического значения существительного, а гетерогенным- в отношении грамматического значения наречия.

Абсолютно гетерогенный характер грамматического значения имен существительных характеризуется тем, что оно абсолютно независимое значение, оно не подчиняется значениям ЧР.

Абсолютно гомогенный характер грамматического значения наречия объясняется тем, что оно - только подчиненное. Оно зависимо от грамматических значений глагола и прилагательного, реже - существительного. Грамматическим значениям наречия не подчиняются значения каких-либо лексико-грамматических категорий системы ЧР.

3. Своеобразный характер носит и формально-лингвистический план наречий.

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Первоначально образовались существительное и глагол. Прилагательное и наречие после них. Это объясняется тем, что человечеством прежде всего ощущались объективный мир и его предметы, явления, а потом их действия и состояния. Ощущение признаков, качеств осуществлялось после всех этих. Поэтому и названия этих явлений появились самыми последними в качестве прилагательных и наречий. Появление глаголов, прилагательных и наречий после существительных отмечается со стороны А.А.Потебни и И.М.Пешковского. Имеются разные классификации ЧР, некоторые из них носят традиционный характер. Однако, среди них есть и, нетрадиционные. Согласно одной из таких классификаций, ЧР делятся на две группы: автосемантические и синсемантические. Все знаменательные ЧР отнесены к первой группе, все служебные - ко второй.

4. Разделение на группы автосемантических и синсемантических характерно и для систем знаменательных ЧР, где существительное и глагол рассматриваются автосемантическими, а остальные - прилагательное, числительное, наречие-синсемантическими ЧР. Ясно, что местоимения занимают промежуточную зону между автосемантическими и синсемантическими знаменательными ЧР. Те местоимения, которыми осуществляются функция и значения существительных и глаголов, относятся к автосемантическим группам; те местоимения, которыми осуществляются значения и функции других ЧР к синсемантическим группам.

5. Наречия в предложении функционируют как обстоятельства, что является основной их синтаксической функцией, с точки зрения которой определяется их изосемичная функция (Г.А.Золотова). Неизосемичная функция наречий наблюдается, если они функционируют в предложении в качестве иного члена предложения, кроме обстоятельства. Неизосемичная функция наречий в предложении осуществляется под влиянием отдельных разновидностей транспозиции (конверсии) - субстантивации, адъективизации, прономинализации и вербализации. Всем этим определяется своеобразная сложность категории наречия.

6. Наречиям свойственна система собственного словообразования, как это наблюдается в системах имен существительных, прилагательных и глаголов. В словообразовательной системе наречия важную роль играет аффиксация и композиция, которые являются основными и ведущими способами при образовании новых лексических единиц категории наречия. Наблюдаются случаи, когда слова, других ЧР в составе которых имеются морфологические показатели словоизменения и

формообразования, рассматриваются в качестве наречия (*тўсатдан*, *қўққисдан*, *бирдан*, *бирданига* и т.д.), что не характерно для систем других ЧР.

7. При сопоставительном изучении наречий узбекского и таджикского языков выяснилось то, что между системами категорий наречий узбекского и таджикского языков, имеются определённые сходства и различия, которые характеризуются в отношении, в основном, характера и грамматического строя. В лексиках таджикского и узбекского языков имеется общий пласт, который состоит из лексических заимствований арабского происхождения: *аввало*, *азал*, *аҳён-аҳён*, *виждонан*, *воқеан*, *доимо*, *доимий*, *жисмонан*, *иттифоқо* / *иттифоқан*, *ихтиёран*, *мажбуран*, *такроран*, *тасодифан*, *тақлидан* и т.д. Некоторые из них в узбекский язык заимствованы через таджикский язык, чем определяется роль таджикского языка в развитии узбекского языка и обогащении его лексики.

Наблюдается сходство между таджикскими и узбекскими языками в отношении образования отдельных сложных, парных и повторных слов. *Бу ер-инчо*, *у ер-он чо*, *бу тараф-ин тараф*,; *ҳар ер-ҳар ер-ҳар чо-ҳар чо*, *бугун (бу кун) –имрўз* и т.д. Подобное же соответствие характерно и для механизма функционирования способа аффиксации в таджикском и узбекском языках. Суффиксация является одним из ведущих способов словообразования в обоих языках.

Следует отметить, что эти сходства в системе словообразования узбекского и таджикского языков не значат, что эти языки не отличаются друг от друга. Некоторые производные по составу слова заимствованы в узбекский язык из таджикского. А также модели словообразовательных структур производных слов типа *эшикма-эшик*, *кўчама-кўча*, *бирма-бир* и др. характерны для образования повторных и парных слов таджикского языка (*дам-бадам*, *дар-бадар*), которые заимствованы узбекским языком из таджикского языка.

Одним из основных различий в системе словообразования узбекского и таджикского языков является то, что для таджикского языка характерно образование наречий посредством префиксации и инфиксации, которое отсутствует в системе аффиксального словообразования узбекского языка.

Таджикские и узбекские языки отличаются друг от друга и в отношении характера процесса конъюнкционализации наречий. В узбекском языке при конъюнкционализации образуются послелогии, а в таджикском предлоги. Эти особенности объясняются тем, что узбекский по своему грамматическому строю относится к



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языкам агглютинативного строя, а таджикский-частично флективного строя.

Таджикский язык является языком с предлогами, а узбекский – языком с послелогоми. Предлоги и послелогии – явления разного плана. В языках с предлогами синтаксические отношения (например, объективные релятивные) осуществляются посредством предлогов, а в языках с послелогоми, наоборот, посредством послелогов. В узбекском языке процесс конъюнкционализации наречий более активен, чем процесс конъюнкционализации наречий в таджикском языке.

Conclusion

Процесс конъюнкционализации наречий в узбекском языке осуществляется под влиянием определенных законов логики, в которых конъюнкционализованные послелогии отрицают прежние признаки, которые были свойственными в наречиях. Конъюнкционализация наречий длительный и сложный процесс: первоначально они являлись или существительными, или прилагательными, или глаголами; а потом – наречиями, а потом –

послелогоми. Послелог – конечный результат процесса конверсии, а также и явление конъюнкционализации и является последней стадией конверсии (транспозиции). Все эти процессы не характерны для системы предлогов в таджикском языке, чем и определяется различие между наречиями таджикского и узбекского языков.

Различия подобного характера системы наречий этих языков этим ещё не исчерпаны. Дальнейшее изучение их в семантическом плане необходимо и важно. Сравнительное изучение системы наречий и других ЧР важно и необходимо еще и в том смысле, что оно способствует научному осмыслению грамматического строя таджикского и узбекского языков.

Таким образом наречия каждого языка характеризуются своими своеобразными грамматическими и семантическими особенностями, изучение которых имеет важное теоретическое и практическое значение.

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Kylychbek Azimovich Kurbanbayev
Candidate of Philosophy Science, docent,
Osh State University,
Kyrgyzstan
ossu.oms@gmail.com

Almaz Omorkulovich Omorkulov
Researcher,
Osh State University,
Kyrgyzstan
ossu.oms@gmail.com

SECTION 30: Philosophy.

INTERRELATION OF ART AND PHILOSOPHY: PHILOSOPHICAL ANALYSIS

Abstract: In this article analyzes the relationship between art and philosophy. Art has been the subject of philosophical research since antiquity, there are many different theories of art, but it cannot be said that its essence, specificity, social significance is understood to the end, that there are no discussion issues in its understanding. This phenomenon of human life is too complex and multifaceted, so that it is possible at some point to create its full and final theory. Therefore, the study of problems in the theory of art remains relevant.

Key words: art, philosophy, nature, reflections of life, creativity, being, reality.

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ВЗАИМОСВЯЗЬ ИСКУССТВА И ФИЛОСОФИИ: ФИЛОСОФСКИЙ АНАЛИЗ

Аннотация: В данной статье анализируется взаимосвязь искусства и философии. Искусство являлось предметом философских изысканий с античных времен, существует немало различных теорий искусства, но нельзя сказать, что его сущность, специфика, социальная значимость понята до конца, что не осталось никаких дискуссионных вопросов в его понимании. Этот феномен человеческой жизни слишком сложен и многогранен, чтобы можно было в определенный момент создать его полную и окончательную теорию. Поэтому изучение проблем теории искусства сохраняет свою актуальность.

Ключевые слова: искусство, философия, природа, отражения жизни, творчество, бытие, реальность.

Introduction

Понимание искусства исторически менялось. Вплоть до Платона искусством называлось и умение строить дома, и навыки врачевания, и поэзия, и риторика..., т.е. искусство рассматривалось прежде всего как деятельность. В античности понятие искусства конкретизировалось, было отмечено видовое многообразие искусства. Фиксируясь связь искусства с действительностью, Аристотель указывал: "искусство - подражает природе". При этом искусство у него - это творчество, а природа - формирующий творческий принцип. Аристотелевская теория подошла к пониманию искусства как отражения жизни, но не решила, как происходит это отражение.

Materials and Methods

Чувственный аспект в искусстве не остался без внимания. Аристотель называл искусство "вероятным бытием, иллюзией реальности, способной вызвать эмоциональную реакцию зрителя". Гегель указывал, что цель искусства "наполнять сердца и давать человеку, развитому и неразвитому, пережить все то, что человеческая душа может содержать, пережить и создать в своих сокровеннейших и таинственнейших глубинах, всё то, что способно глубоко волновать человеческое сердце". Чувственный характер искусства отмечал Л. Толстой: "Искусство есть деятельность человеческая, состоящая в том, что один человек сознательно, известными внешними знаками передает испытанное им чувство и другие люди



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заражаются этими чувствами и переживают их". Н. Чернышевский считал, что "все искусства, подобно живой действительности, действуют прямо на чувства" [11, 92]. Большой вклад в развитие чувственной теории искусства внес Л. Выготский в работе "Психология искусства". По его мнению, искусство - "язык чувств". Выготский вскрыл сущность искусства через психологию, раскрыл функционирование искусства и смысл художественного творчества, показал связь чувственного и разумного в искусстве.

Посредством чувств, которые проявляются в положительных или отрицательных образах, искусство воздействует на личность. В этом плане искусство способно ненавязчиво проповедовать политические и религиозные идеи, формировать нравственные качества человека, просвещать, ну, и, конечно, воспитывать определенное эстетическое отношение человека к действительности.

Искусство на примере положительных и отрицательных персонажей показывает и тем самым формирует идеал, а так же и эстетический вкус личности. Так, гуманисты эпохи Возрождения выдвинули идеал гармонично развитого человека, сочетающего в себе мудрость ученого, талант художника, отвагу воина. Силу и величие духа показал Микеланджело в статуе "Давид", здесь воплощена совершенная красота человеческого тела в единстве с идеей гражданского подвига. Именно эта скульптура служит образцом практически всем деятелям изобразительного искусства для отточки своего мастерства, а зритель, вот уже 500 лет воспринимая её, получает урок мужества, а идеальные пропорции тела и духовность образа делают это произведение искусства высшим критерием эстетического вкуса. "Искусство, аккумулируя общественно-эстетические идеалы, выступает как важнейшее орудие воспитания художественного вкуса". Воспитывая эстетическое чувство, "чувство красоты", искусство пробуждает в человеке творца и мыслителя, способствует культуре межличностного общения [8, 167].

Посредством чувств человек открывает для себя знания в искусстве. В искусстве познать - значит прочувствовать. Выготский пишет, что "даже чисто познавательные суждения в произведении искусства ... являются эмоционально-аффектными актами мысли". Это дает более "крепкое" запоминание фактов и событий, т.к. оно идет через эмоции в подсознание. "Доступность" знания в искусстве связано с тем, что это "чувственное познание" и откладывается оно не как внешнее для человека, а как часть духовного мира личности. Однако, информация, полученная через искусство особым

образом запечатлется в человеческой памяти. Так, например, кинозритель спустя некоторое время может в деталях и не помнить фильм, но то эмоциональное состояние, которое он прочувствовал при просмотре - он не забудет. Память в искусстве - это "память сердца", эмоциональная память, а не запоминание информации [5, 47].

Здесь встает вопрос об истинности знания в искусстве. Для искусства не существенно, насколько истинна информация, цель искусства не доказать или показать истину, а заставить человека над ней задуматься. "Художественная правда - это правда человеческих характеров".

Особую практическую значимость сейчас приобретает проблема социальной роли искусства, его влияния на человека, на формирование личности. Одной из черт переживаемого нами кризиса является распространение в обществе антигуманного искусства, пропагандирующего насилие, сексуальную распущенность и другие социальные пороки. Возникают вопросы: Не опасно ли такое искусство для общества? Имеет ли оно определенное социальное назначение? Чтобы ответить на эти и другие подобные вопросы, необходимо глубоко понять специфическую природу искусства, тот способ, каким оно влияет на человека. В этом отношении еще имеются проблемы, требующие дальнейшего изучения.

Настоящий смысл произведения искусства есть совокупность всех исторических смыслов. Именно неразгаданность, тайна, загадка, метаморфоза художественного текста позволяет каждой новой эпохе "вбрасывать" в произведение свою онтологическую проблему. В процессе исторической жизни произведения создается его культурная аура, тоже входящая в состав этого художественного текста; т.е. история интерпретаций произведения [1, 241].

Так искусство обретает онтологический статус - быть зеркалом, голосом не субъекта и объекта, а самого бытия. В отечественной эстетике онтологический подход к искусству характерен для Владимира Соловьева: "Поэт неволен в своем творчестве. Это - первая эстетическая аксиома. Настоящая же свобода творчества имеет своим предварительным условием пассивность, чистую потенциальность ума и воли... И сама поэтическая душа свободна в том смысле, что... повинуетя лишь тому, что в нее входит или приходит к ней из той над сознательной области, которую сама душа тут же признает иною, высшею, а вместе с тем родною". Язык искусства есть средство не выражать готовую мысль, а создавать ее. Таким образом, лексические формы языка искусства могут перейти в идейно-концептуальные формы только



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в случае, если художественный язык обладает возможностью суггестивного воздействия (внушения). Полноценный контакт предполагает не только зов со стороны текста, но и отклик реципиента.

Чтобы искусство развивалось, человек должен заговорить на языке, адекватном искусству. Владение языком искусства складывается из владения техникой, знания отношения между техникой и языком (умения воспринимать технику в ее функциональной нагрузке) и умения переносить знание этого соотношения на новый материал (экстраполировать владение языком).

Искусство есть язык художника, с помощью которого можно пробудить в человеке его собственную мысль, но нельзя ее сообщить в авторской непреложности; поэтому содержание произведения искусства после завершения работы над ним развивается уже не в художнике, а в воспринимающих. «Содержание произведения - это как бы отрезок единого открытого события бытия, изолированный и освобожденный формой...».

Произведение искусства предполагает широкое, но не беспредельное поле для интерпретаций. Художественное произведение потому поддается истолкованию, интерпретации, пониманию, что язык - это универсальная среда, в рамках которой осуществляется понимание и истолкование. Интерпретации обеспечивают историческую жизнь художественных произведений, невзирая на то, что они «обволакиваются новыми, соответствующими эпохе ассоциациями, меняются в интерпретациях, варьируются в звуковом отношении».

С упадком гуманизма и красоты исчезает питательная почва для искусства. Ведь оно - реальность эстетического идеала, который состоит в предметном развертывании богатства человеческой сущности, в действительном воплощении свободы человека в предметном и общественном мире, в полной гармонии индивида и природно-общественного целого.

Прогресс искусства и его авторитет в обществе определяется достигнутым уровнем культуры, тем, насколько жизнедеятельность людей становится содержательной, творческой, эстетически выразительной и насыщенной. Как нам представляется, это возможно лишь тогда, когда люди имеют дело с подлинным искусством, искусством в его сущностных проявлениях. Понять и осмыслить последнее невозможно без соответствующего философского анализа истины в искусстве, в том числе, в искусстве изобразительном.

Критерием истины в искусстве является практика в художественном познании, которая относится к социальной сфере познания с

установлением роли и значения социально-исторической практики людей. Происходит движение к абсолютной эстетической ценности подлинного искусства, в котором конкретно-эстетическое содержание всегда перерастает в общечеловеческое. Только практика исторического функционирования произведения искусства может говорить нам о его действительной ценности.

Отношение к искусству в обществе внутренне противоречиво. Произведения ценятся выше, чем творец. Это общая сторона античности, но в Риме статус художника предельно низок. Известные поэты находятся в униженной роли «клиентов» знатного господина. Еще хуже положение рабов - художников, музыкантов, скульпторов. Профессия актера лишала человека гражданской чести. Это усилило зависимость искусства от обыденного сознания.

Искусство входит в повседневность всех сословий, но только аристократия, имеющая досуг и умеющая его использовать, может выйти за границы обыденного уровня, поднимаясь до «знатоков». Дифференциация сознания публики зашла настолько далеко, что была осознана философами античности как сложнейшая проблема. Характер влияния искусства на публику дает, по Платону, основание для введения цензуры.

Традиционная культура развивается на основе либо сельской, либо городской общины. Сельская община рождает фольклор. Город-государство, полис - колыбель классической культуры и профессионального искусства. Отношение к искусству двойственно, его основа - «цивилизация досуга». Музыка - один из предметов обязательного цикла для каждого свободнорожденного. Философы и педагоги высоко ценили её воспитательное значение. Но профессиональные музыка и танцы были уделом слуг или рабов. Когда Аристотель оценивал любительство и восприятие искусства выше, чем творчество профессионалов [7, 421], это не только проявление презрения аристократов к профессиональному труду. За его позицией стоит отношение к добродетели как к тому, что требует досуга.

Э.К. Шарипова отмечает, что «культура, естественной, длительной основой которой была кровнородственная система связей, является весьма благоприятной почвой для клановой политической культуры, которая за тем существенным образом влияет на государственную специфику, систему властных отношений» [12, 76].

Conclusion

Искусство как часть досуга представляет канал развития обыденного сознания. Задача



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профессионала - приносить пользу и доставлять удовольствие другим. Но без искусства не было бы и восприятия, не было бы и «знатоков».

Для развития взаимодействия обыденного сознания и искусства были созданы возможности, которыми античная культура не обладала даже в периоды расцвета. Античное искусство не могло перестроить все обыденное сознание, да и не стремилось к этому. Одни жанры существовали

для «образованной», другие - для широкой публики.

Познавательная, воспитательная, коммуникативная, ориентационная, гедонистическая и другие функции искусства реализуются при помощи образного отражения объективной реальности. Музыка, живопись, литература, театр, кино и другие виды искусства обладают уникальным, образно-воспитательным воздействием на личность.

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Kylychbek Azimovich Kurbanbayev

Candidate of Philosophy Science,
Osh State University,
ossu.oms@gmail.com

Ainura Kulmatovna Nurbaeva

Researcher,
Osh State University,
Kyrgyzstan
ossu.oms@gmail.com

SECTION 30: Philosophy.

THE ESSENCE AND SPECIFICITY OF ART

Abstract: In this article explores the essence and specificity of art. As a form of public consciousness, art reflects the environment in the form of images that act on the feelings of people, and the article analyzes the specifics of art in the modern world. As the author points out, the problem of the social role of art, its influence on a person, and the formation of a personality is of particular practical importance.

Key words: arts, fiction, painting, graphics, sculpture, architecture, image, reality, consciousness, aesthetics.

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СУЩНОСТЬ И СПЕЦИФИКА ИСКУССТВА

Аннотация: В данной статье исследуется сущность и специфика искусства. Как форма общественного сознания искусство отражает окружающую среду в форме образов, которые действуют на чувства людей, а также в статье анализируется специфика искусства в современном мире. Как отмечает автор, особую практическую значимость сейчас приобретает проблема социальной роли искусства, ее влияния на человека, на формирование личности.

Ключевые слова: искусства, художественная литература, живопись, графика, скульптура, архитектура, образ, реальность, сознание, эстетика.

Introduction

Искусство являлось предметом философских изысканий с античных времен, существует немало различных теорий искусства, но нельзя сказать, что его сущность, специфика, социальная значимость поняты до конца, что не осталось ни- каких дискуссионных вопросов в его понимании. Этот феномен человеческой жизни слишком сложен и многогранен, чтобы можно было в определенный момент создать его полную и окончательную теорию. Поэтому изучение проблем теории искусства сохраняет свою актуальность.

Materials and Methods

Искусство – отрасль человеческой деятельности, стремящаяся к удовлетворению одной из духовных потребностей человека, а именно любви к прекрасному. Искусство подразделяется на тоническое: поэзия, музыка и на образное: архитектура, скульптура, живопись [2, с. 325]. Вполне очевидно, что подобное

определение искусства не является философским. Во-первых, поэзия и музыка тоже представляют собой образное видение мира, но образы эти другие они вербальны, а не визуальны, как в живописи. Во-вторых, философский подход подразумевает разностороннее, глубинное рассмотрение любого явления, и не по- тому, что философия так хочет, а потому что мир, окружающий нас, не линейен, не плосок, не прост. Такая сегодняшняя очевидность мира когда-то была обнаружена как сенсация и вызвала среди ученых смятение, кризис мировоззрения, отразившись в науке как «кризис физики». И это был не частный кризис в научном, позитивном знании, а кризис в глобальном понимании мира, кризис в философии. Вообще, грань между физикой и философией очень хрупка, а может быть ее и вовсе не существует. Не случайно, греческие философы на «заре» философии предпочитали называть себя не философами, а физиками. И, думается, греки демонстрировали не наивность мышления, а некую чистоту мысли,



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свободную от условностей зрелого мира, отягощенного разумными построениями, позволяющую отражать его богаче.

Мир, окружающий нас, не просто разносторонен, он противоречив. В нем причудливо сочетаются противоположности. Еще Гераклит Эфесский обратил внимание на то, что часто враждебное находится в согласии, противоположное - совпадает. Свет не может существовать без тьмы, день – без ночи, смерть – без жизни. «Один и тот же путь вверх и вниз», «У винта путь прямой и кривой», «У окружности начало и конец совпадают». Отсюда он выводит идею относительности всех ценностей: для рыб морская вода – чистая, свиньи купаются в грязи, птицы моются в пыли, ослы предпочитают солому золоту.

Прекраснейшая обезьяна отвратительна по сравнению с человеческим родом, болезнь делает сладостным здоровье, голод сообщает приятность сытости, а тяжкий труд дает вкусить отдых [3, с. 35]. Поэтому перед философией стоит особая задача – отразить мир во всей его сложности и многообразии, а значит, целостности, что существенно отличает философское знание от научного, разрывающего мир на части, и сближает, скорее, с искусством. Но стоит ли изучать мир по частям? Несомненно стоит, чтобы достичь детального, конкретного знания. Но мир не существует по частям. И это уже прерогатива философии.

«В широком смысле под искусством понимается всякая творческая созидательная деятельность человека. Именно в этом смысле употребляют его древние греки. В переводе с греческого искусство означает «знание», «творение», «сознание». Все, что связано с деятельностью человека и с продуктами этой деятельности, относится к сфере *poiesis* – человеческой сфере, созданной в противоположность *physis* – сфере природной, т. е. не созданной им. В узком смысле под искусством понимаются процессы и результаты художественного творчества в его различных формах – живопись, музыка, поэзия и т. д.» [3, с. 25].

Важным критерием художественности содержания искусства является жизненная реальность, истина. Познание действительности при помощи различных форм искусства способствует расширению знаний человека и формирует мировоззрение личности. Результатом воздействия искусства на человека является формирование мировоззрения, морали, а также эстетических вкусов. Поэтому для современного человека важно социально – преобразующее значение искусства, его действенная роль как могучего способа

влияния на умы и чувства индивида в условиях глобализации.

В чувственно – конкретной форме искусства отражаются самые важные проблемы человеческого бытия. Социальная роль искусства заключается в том, чтобы быть специфическим средством воздействия на идеологическое познание жизни. Особенность искусства заключается в ценностном, конкретно – чувственном отражении объективной реальности и в результате этого в системном влиянии в духовной мир личности. Л.Н. Столович утверждает, что «искусство в его художественной специфике и ценности – это явление, созданное «по законам красоты» для отражения действительности в ее эстетическом своеобразии, для выражения эстетического сознания человека и для эстетического воздействия на людей. Искусство возникло для того, чтобы формировать, воспитывать, направлять эстетический вкус человека и общества. Л.Н. Столович выделяет 14 функций искусства и подчеркивает, что «основания функции искусства» - эта функция эстетического воздействия на личность человека. Эстетическое – «системообразующее начало различных функциональных значений искусства» [9, с.19.-20].

Из всего многообразия эстетических объектов самым важным является духовная жизнь человека. Поэтому потребность в эстетичности, гармонии поведения является необходимым компонентом личной культуры. Прекрасное во взаимоотношениях человека с человеком – это стремление заботиться друг о друге, помогать друг другу. Внешняя красота должна быть выражением внутреннего духовного богатства. В структуре эстетических потребностей одно из ведущих мест занимает потребность в искусстве. М. Горький утверждал, что цель искусства – преувеличивать хорошее, чтобы оно стало еще лучше, преувеличивать плохое, уродующее человека, чтобы оно возбуждало ненависть со всякому злу. Рассматривая искусство как сложное явление, необходимо выделить его полифункциональность, многоплановость воздействия на личность. Познавательная, воспитательная, коммуникативная, ориентационная, гедонистическая и другие функции искусства реализуются при помощи образного отражения объективной реальности. Музыка, живопись, литература, театр, кино и другие виды искусства обладают уникальным, образно-воспитательным воздействием на личность.

Природа искусства в диалектическом единстве всех его функций и особенностей, однако это не снимает спор о специфике искусства. И.Астахов



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указывал, что "отрицание эстетической сущности искусства означает отрицание художественной формы и содержания" [4, с.124]. Встает вопрос: представляет ли искусство по форме специфическое эстетическое явление? Как соотносится художественное и эстетическое?.

Само понятие эстетического было введено в XVIII веке А. Баумгартеном, под эстетическим он понимал "Чувственное познание, помогающее постичь красоту действительности", т.е. у Баумгартена суть эстетического - красота, которая воспринимается и познается человеческими чувствами.

Под эстетическим, как известно, всегда понимают красоту, или прекрасное. Во всяком случае, все признают, что "прекрасное" есть основная эстетическая категория. Бесспорно, искусство включает в себя эстетический момент. Однако, сразу становится очевидно, что искусство отражает не только красоту, "красивое не есть искусство", указывал Н. Чернышевский [12, с.89].

Л. Столович определяет эстетическое как "чувственно-образное и идейно-эмоциональное, духовно утверждающее человека в действительности" [10, с.43]. Во-первых, он отождествляет чувственное и эстетическое. Если, например, человек испытывает эмоцию страха, то что здесь эстетического? И не всякий образ, сопровождающийся эмоцией, является эстетическим. Так, у человека, испытывающего жажду, образ стакана с водой, несомненно, вызовет чувство радости, но природа этой радости не эстетическая, а всякая ли эмоция "утверждает человека в действительности"? Страх, плач не только не утверждает, не дает человеку самоутвердиться, но и может унижить его. Что здесь эстетического?

Как известно, чувства делятся на интеллектуальные, социальные и эстетические. Эстетическое чувство - это чувство красоты, прекрасного. Красота - одна из универсальных форм бытия материального мира в сознании человека. Известно, "эстетическая деятельность шире художественной" [10, с. 147]. Эстетическое и художественное разные понятия. Поэтому художественная форма не есть чисто эстетическое явление. Сущность художественной формы вытекает из её назначения служить выражением содержания искусства, а содержание произведения искусства несет не только эстетическое, но и нравственное, идеологическое и т.д. Поэтому непринятие эстетического в качестве сущности искусства, совсем не означает, что художественная форма и содержание теряют смысл. Таким образом, эстетическое не исчерпывает сущности искусства.

Э. Шарипова подчеркивает, что "репутация руководителя как специалист в принятии своих решений и оценка деятельности сотрудников, независимо от объективности. Для того, чтобы достичь до уровня лидера политических, научных, технических, этических, социальных и психологических факторов необходимо развивать свои навыки и искусства управления"[13, с. 12].

Conclusion

Искусство понятие сложное и многогранное, основные концепции искусства познавательная, эстетическая, воспитательная, исходившие из функций искусства (познавательной, эстетической, воспитательной), свели по сути смысл искусства к одной из его особенностей. Искусство- это форма отражения и осознания действительности. Хотя искусство - это прежде всего искусственно созданный человеком мир, но этот "новый мир" есть образ реального мира, т.е. человек творит "новую реальность" из существующей действительности. Искусство обусловлено природой и теми общественными отношениями, в которых находится человек. Искусство зависит от характера деятельности людей, от степени освоения природы, от уровня производства. "Искусство, - как полагал Ж. Гюйо, - это функция общественного организма". Отсюда главным родовым признаком искусства, в числе других признаков, присущих понятию "искусство", есть признак формы общественного сознания. Этот признак отличает искусство от всего, что не есть форма общественного сознания. Но известно, что понятие определяется еще и видовым отличием (спецификой), т.е. тем, что выделяет искусство как форму общественного сознания от других форм общественного сознания: религии, политики, морали, правосознания, науки.

Искусство рассматривает явления и предметы не ради их простого отображения, а чтобы возбудить эмоциональное состояние души. Все продукты, т.е. произведения искусства, предназначены для восприятия органами чувств: зрением и слухом, именно посредством их передается содержание и смысл произведения искусства. Непосредственная область действия искусства - это чувства, а через чувства и душу человека искусство влияет на личность в целом. Искусство пробуждает чувства, но это особые чувства (радость встречи с другом, например, это тоже чувство, но искусство здесь ни при чем), в искусстве чувства возбуждаются не реальными фактами, а искусственно переданными художником, писателем, музыкантом. Особенности художественной эмоции выделил С. Раппопорт. Он пишет: "Художественная эмоция всегда несет социально-историческое содер-



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жание, общее для исходных переживаний многих людей, художественная эмоция всегда положительна, даже когда в обыденной жизни она и негативна, отрицательные эмоции приносят положительный эффект".

Таким образом, искусство не возникает там, где есть даже самое искреннее чувство, необходимы разум, творчество, воображение. Но без эмоций искусство теряет свою сущность, свое предназначение.

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G'ayratbek Mirzapo'latovich Khaydarov

Head of the chair of "Theory and practice of building democratic society in Uzbekistan" of Andizhan State University, PhD in History, Republic of Uzbekistan

SECTION 13. History.

FROM THE HISTORICAL OF ECONOMY RELATIONSHIPS WITH THE COUNTRIES ENROLLED IN EUROPEAN UNION OF THE REPUBLIC OF UZBEKISTAN

Abstract: In this article have been analyzed historical of economy relationships with the countries enrolled in European Union of the Republic of Uzbekistan by historical literatures and statistic materials as well.

Key words: economy, economic relationship, European Union, Uzbekistan, investment.

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Introduction.

From the early days of Independence of Uzbekistan, it became the member with equal rights and began to run foreign policy independently, taking possession in the world society, selecting the way of cooperation with the international organization. As our President Sh.Mirziyoyev mentioned: "We carry out our activity in the field of foreign policy, benefits for our people and country in detail. The basis of the politics consists of peace-loving, not interfering in home – affairs of the countries dealing with possible conflicts and oppositions in a political way and peacefully. We still keep up with a productive cooperation with all foreign countries and World community. On this occasion, we keep principles in running open, friendly, pragmatic politics" [1].

In the wider globalization, integration, and information process, cooperation with international organizations is also beneficial for the world countries.

For this purpose, it is expedient to the further develop bilateral and multilateral ties with international, regional organizations, developed and developing countries.

The following main principles of Uzbekistan's foreign policy and foreign economic relations are developed which were developed during the first year of independence of Uzbekistan.

First of all, the priority of the national interests of the state taking into consideration the mutual interests.

Secondly, equal rights and mutual benefit non-interference in the internal affairs of the countries.

Thirdly, regardless of ideological views, openness to cooperation, commitment to universal values, peace and security.

Fourth, priority of international law norms.

Fifth, to develop bilateral relations both on bilateral and multilateral norms.

We consider foreign relations as a guarantee of security and stability for successful development of international relation in various fields.

In its turn, cooperative relations between European Union member countries and international organizations and the Republic of Uzbekistan plays in important role in stabilizing peace, developing cooperation in socio economic, trade scientific – technic spheres as well [2].

European Union is an international organization taking form of international organization and federative state as well. At first, it was named European Community ("general market"). Contract about establishing European Union was signed in 1992 in Maastricht by 12 countries. The contract which aimed at finding political and economical unit of European countries came into force on November 1, 1993. European Union aims to build a firm community of European countries to create place without inside borders, to help long term economic



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progress improving economical and social effectiveness [3].

Furthermore, developing relationship with European Union and its members is one of the main foreign policy priorities of our Republic which acceptable for our national concern.

Potentials of Europe are important in cooperating with the world community from the point of our national concerning. Europe and the whole west are source of technologies and investigations being the symbol of today's democracy and human rights. All of them is vital need for the state which had chosen novelty and development as its strategic goal to take its first steps to the century 21st as security supplied, flourishing, highly developed modern democratic country, Uzbekistan.

On the one hand, it takes creating safe and firm environment to bring investigation and on the other hand it shows that the only country which carries out reforms widely in all spheres of life can provide such safe circumstances [4].

European Union has importance for foreign policy of Uzbekistan and the significance of their relationships can be seen in the followings;

Firstly, developed countries of European Union such as France, Germany, The UK, and Italy are the sources of technology for Uzbekistan.

Secondly, holding regional stability and safety is a vital object for both sides.

Cooperation between Uzbekistan and European Union can be divided into two:

1. Establishment of long period partnership and cooperative agreement between Republic of Uzbekistan and European Union. 2. The instruction of "Tasis" which is directed to the field of scientific – technic and its role to carry out reform. The cooperation between Uzbekistan European Union was signed in 1992 with the help of Memorandum [5]. Because of supporting social, political and economical reforms in our country. The European Union has been working on technical aid projects of Commission of European community since the early years of independence in Republic. Uzbekistan is participating in cooperation proceedings on those specialized reforms of providing safety of border BOMKA, KADAP that is referred to struggling against narcotics, TRASEKA that is specialized for transport, INOEYT – issues of energetics, TEMPUS is taken into account as a educational system and also science. Transporting is fundamental to join in European markets by transport for Uzbekistan [6]. So, TRASEKA instruction was created relating to developing the branch of transport communication between Central Asia and European Union in 1993 Stimulating of Central Asia and Caucasus, as well as Uzbekistan to Europe and the World markets, providing TRASEKA to join Trans Europe transport, encouraging enlist investigations of international

financial organizations were included into the main aims of TRASEKA. Including reconstruction existing automobile and railway stations [7].

According to "the order about measures to improve cooperation with the European Union and its member states" of the Cabinet of Ministers of the Republic of Uzbekistan. During 2004 and 2005 a comprehensive program of voluntary organizational measures for the implementation of agreement between the government of Uzbekistan and the European Union and its member states, exchange legal information cooperation in political sphere, strengthening the political balance between them, supreme assembly strengthening cooperation among national parliaments, treaty establishing a nuclear – weapon free – zone European Union support, democracy and human rights cooperating, parliamentary human rights commissioner and European Union ombudsman and also establishing practical links between ombudsman of European Union member states and developing cooperation in economic and trade areas, wider involvement of issues of raising and protection, creating favorable conditions for entry of goods and services of Uzbekistan into the markets of the European Union, development of a package of investment projects jointly with investment institutions and banks of the European Union to stimulate direct investment in the real sector of Uzbekistan's economy, delegation visits to the European Union countries and business circles of Uzbekistan have created bilateral trade and economic ties. Attracting concessional loans to Uzbekistan Strengthening cooperation in the field of building a joint venture between Uzbekistan and European Union in the field of intellectual, industrial, commercial, scientific, technical, educational, ecological, health and cultural cooperation [8].

European Union is an important trading partner of Uzbekistan and plays a key role in the foreign trade relations of the country. By the end 2010, the volume of foreign trade turned over of Uzbekistan with the European Union was 1965 million. Including export – 547.8 million, import – 1418 million. The volume of mutual trade turnover increased by 1.2 compared to 2009. At the same time, there are huge potentials to expand bilateral trade. Therefore, 821 corporations that came from the members of European Union are functioning in our country [9]. 612 of them are corporations, 209 companies are working on 100 per cent European investment. Uzbekistan is the country that can use the most comfortable system for foreign countries by European Union [10].

In conclusion, we can say, for new thousand years in World community are becoming important political, social – economy changes. During this process, carry out the member countries of European Union the foreign policy of Uzbekistan, increasing of

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economical development is the important way of improvement the lifestyle of our population. The joining of Uzbekistan to world integration, widely being expended between international organizations and countries. Increasing of preparation trained

personal, entering of high productive foreign technologies, the exchanging of informational technologies cause to improve a new state, the development state.

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Khanim Garayeva

MA in English Literature
Azerbaijan University of Languages
Baku, Azerbaijan
garayevak@gmail.com

SECTION 29. Literature. Folklore. Translation Studies.

ATYPICAL MILITARY METAFICTION ABOUT WAR

Abstract: This article describes the characteristic features of anti-war novel by Kurt Vonnegut's novel "Slaughterhouse number five, or the Crusade of Children" and the author's personal thoughts and attitude towards the war.

Key words: military metafiction, war, novel, Kurt Vonnegut.

Language: English

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Introduction

On May 29, 1945, 21 days after the Germans had surrendered to the victorious Allied armies, a father in Indianapolis received a letter from his son who had been listed as "missing in action" following the Battle of the Bulge. The youngster, an advance scout with the 106th Infantry Division, had been captured by the Germans after wandering behind enemy lines for several days. "Bayonets," as he wrote his father, "aren't much good against tanks." Eventually, the Indianapolis native found himself shipped to a work camp in the open city of Dresden, where he helped produce vitamin supplements for pregnant women. Sheltered in an underground meat storage locker, the Hoosier soldier managed to survive a combined American/British firebombing raid that devastated the city and killed an estimated 135,000 people – more than the number of deaths in the atomic bombings of Hiroshima and Nagasaki combined. After the bombing, the soldier wrote his father, "we were put to work carrying corpses from Air-Raid shelters; women, children, old men; dead from concussion, fire or suffocation. Civilians cursed us and threw rocks as we carried bodies to huge funeral pyres in the city." [2].

Materials and Methods

After the Victory in Europe in May 1945, this prisoner called Kurt Vonnegut was transferred to the United States and got his honorable discharge in July 1945.

During his long life he wrote 14 novels. The first - "Mechanical piano" - was published in 1952, the last one - "Timequake" - in 1997, in addition, a lot of short stories, essays, plays. Critics have found in his books a unique fusion of fantasy, philosophy, black humor and emotional publicism. He, calling himself a pessimist, nevertheless admitted: "What I always tried to do is to look for things for which it is worth living in this world. In fact, it can be said that my whole life consists of small insights."

Kurt's study at the Eastern University was interrupted by US's entry into the World War II. "I was flunking everything by the middle of my junior year," he admitted. "I was delighted to join the army and go to war" [2]. In January 1943, he volunteered for military service. Although he was rejected at first for health reasons – he had caught pneumonia while at Cornell – the Army later accepted him and placed him in its Specialized Training Program, sending him to study mechanical engineering at the Carnegie Institute of Technology in Pittsburgh and at the University of Tennessee [2].

Some have wondered how Vonnegut, who stresses pacifism in his work, could volunteer so eagerly to go to war. It is a question even Vonnegut has trouble answering. "As for my pacifism," he has said, "it is nothing if not ambivalent." When he asks himself what person in American history he would most like to have been, Vonnegut admits to nominating none other than Joshua Lawrence Chamberlin, college professor and Civil War hero



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whose valiant bayonet charge helped save the day for the Union at the Battle of Gettysburg.

The army left a prominent imprint on his entire life and work, made him a passionate fighter against the war and was reflected in his novel "Slaughterhouse number five, or the Crusade of Children" which brought him a worldwide fame. The novel was published in 1969, in the midst of the social turmoil in the American society, caused by the Vietnam War. It was then when the country was horrified with the news that American soldiers had massacred the peaceful population of the Vietnamese village of My Lai. Then rioting students took over campuses and the management of universities. In New York, the legendary Woodstock festival was held as a token of loss. And at this time, at the height of public disappointment of the Vietnam War appeared "Slaughterhouse number five", a book that made Vonnegut a symbol of the so-called counterculture of the 60s. Black humor and sharp social criticism have helped the writer create an alternative fantasy world for his characters, many of whom have emerged from his own life. First of all, it concerns the time traveler Billy Pilgrim, especially when he returns to 1945, the third day after the destruction of Dresden. Having survived in Dresden, Vonnegut clearly expressed his attitude to violence and injustice with the words of his hero: "I told my sons not to take part in massacres and not to feel joy or satisfaction when they would hear about the beating of their enemies".

Unlike other patriotic military novels describing the heroes of the war and calling the youth to fight for their Motherland, Kurt Vonnegut never reflected the war in this metafictional novel as worthy for sacrificing lives. The participants were youngsters of the ages 21 and more, and any boy at this age was not supposed to attend war or be killed. This idea is directly revealed in the first chapter of "Slaughterhouse number five" when the writer is having a conversation with Mary O'Hare about the content of the book. Mary was the very person who made the writer to dive into the real essence of the book that he wanted to write. As a whole, the book is about the extensive bombing of Dresden and World War II, but except several episodes from the prisoner life of Billy Pilgrim not any other details were described relating to the war.

And unlike patriotic novels with glorious heroes, the heroes of this novel are, first of all, the British officers who were captured by the Germans. And here again as characters, holders of "spiritual values", helping to give the world a sense, Vonnegut chooses Europeans. He guides readers to a convention familiar to European literature, according to which a true hero captured by enemies in the

hardest conditions of captivity retains a sense of dignity, courage, strength, helps the weak, does not give up attempting to resist, tries to escape, etc. However, this convention borrowed in a ready-made form, does not work in this novel. Already the scene of the appearance of the British destroys it: exhausted by a terrible war hungry Americans meet in the camp for prisoners of war healthy, vigorous, clean and well-fed British officers who greet them with a cheerful song. The British are noble, they have dignity in the presence of the Germans, do not de-bounce - they regularly do exercises, encourage the descended Americans who try to escape. They are respected by the Germans, admiring the spiritual strength and heroism of their enemies.

In this novel the true meaning of heroism lies in its theatricality, in its conditionally-game character. The English, having taken prisoner, arrange endless performances and acting in a role of heroes. The function of spectators, at first, is performed by the Germans, then the Americans. In this performance everything is extremely conditional. As well as it is necessary to heroes, Englishmen bravely overcome all burdens of captivity though there is no necessity as jailers treat them as holiday makers at a resort. Heroes are constantly organizing shoots, doing trenches although everyone knows that they cannot escape from the camp.

This type of heroism is a kind of aestheticization, an attempt to bring a diverse life to the scheme. The world is narrowing down to the scale of the scene where the laws invented by the director-hero do not work in reality. The hero selflessly acts, fascinated by the beauty and drama of his own game. Narcissism, interest in one's own self, which is exclusively invented by himself, isolates the subject, takes him to the space of his schemes and puts above his life. The English officers enjoy the feeling of power, the ability to control the surrounding, to show justice, condescending favor to those whom they include in their world as subordinates. They are happy to play the role of "good wizards" even towards Americans who are deeply despised [2].

In heroism, as in any project of the intellect, exists the principle of violence. Vonnegut explicates this idea by introducing the figure of Roland Weary in the novel. Despite the fact that this character is an American, his thoughts on heroism are of purely English origin: in this case, Vonnegut refers to the military stories of Rudyard Kipling (a collection of "Three Soldiers"). Performed theatricality, vivid characters demonstrated in famous (often romantic) works about the war or adventures achieving glory are completely different as Kipling contrasts, a more democratic understanding of heroism. He depicts the

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“heroism of everyday life” which consists in the conscientious fulfillment by man of his duty. This is an inconspicuous feat of ordinary soldiers, ordinary English (Scottish, Irish) guys who do not perform anything outstanding but honestly pulling on the webbing service, without thinking of glory and reward. In one of his program stories Kipling refers to his "The Three Musketeers", automatically adjusting the reader to the tradition of depicting wars, fights and adventures that Dumas described in his famous novel. However, the expectation of the reader is deceived, because instead of three musketeers, brilliant noblemen, ready for incredible feats, three ordinary British soldiers Mulvaney, Ortheris and Learoyd appear before him, simple and not very literate servants, famous exclusively within their regiment for their “dexterity on all sorts of tricks”. The personality of each of them does not differ in scale. And yet it is on them that the British Empire, so beloved by Kipling, is held. As for the brilliant officers, peers, lords, adventurers, tourists - in short, those who could have acted as Dumas’ heroes - are portrayed by an English writer without special sympathy, petty, stupid and inadequate reality [1].

Along with the philosophy of Christianity, Vonnegut draws attention to a new type of philosophy which is, in sense, Billy Pilgrim’s own religion as he becomes “unstuck in time”. While Christianity may say that fate and free will are the matters of God’s divine choice and human interaction, Tralfamadorianism state that things are and always will be, and there is nothing that can change them. Things happen because they were always destined to be happening. The narrator of the story notes that the Tralfamadorians see time all at once. According to their studies on the planets in universe, Earth was the only place where the concept of free will existed. In short, Tralfamadorian philosophy bases itself on “determinism and passivity” as all time is predestined and whatever will be, will be. No divine hand does exist or can change anything simply because it has already happened or will happen. Using the Tralfamadorian passivity of fate, Billy Pilgrim learns to overlook death and the shock involved with death. Pilgrim claims the Tralfamadorian philosophy on death to be his most important lesson [8, p. 54].

The war for Tralfamadorians is an unfortunate episode of history, an unpleasant incident, a state not peculiar to the universe, not deserving attention. In its turn, Vonnegut discerns in the surrounding world non-presence, emptiness. Reality is always seen to him as absurd, engulfed in the war, even if peace externally reigns everywhere. The Tralfamadorians talk about life, trying to find a semantically rich word that evokes the illusion of presence [4, p.180]. And Vonnegut must give the war, that is, emptiness and

death. It is impossible to talk about them directly, because, having designated absurdity (war), putting it into words, we thereby conceptualize it, forcing it to lose its status [5, p.51]. The only way to write about her is to skip it. In the novel “Slaughterhouse number five” the war corresponds to a gap. Vonnegut never shows the Dresden bombardment. We see what happened before and after it. But the very episode of the bombing, which should have become the core of the novel, its main event in the text is missing. Emptiness remains empty [7]. Her possible verbal equivalent in the novel can only be an absurd word, a meaningless bird chirping, “Futu-fut?” [1].

The narrator, in turn, appears as an absurd man, like Meursault from the story of Albert Camus “Stranger”. His view is almost dehumanized and devoid of stereotypes of European culture, which is emphasized by a special Vonnegutian indifferent intonation. He fixes reality, but does not attempt to interpret it. The author deprives himself of the powers of the all-knowing demiurge, who has authority over the world he created. He dissolves in this world, becomes depersonalized, acquires a third person and, finally, becomes just one of the many characters in the novel. Billy Pilgrim discovers Vonnegut in the toilet, accidentally looking there after a hearty dinner.

“Catch people until they become generals, presidents and senators, and poison their mind with humanism.” - in this way Vonnegut formulated the purpose of his novel. Many people consider that his “Slaughterhouse” has not lost its relevance in our days, when America is still in a war. “I re-read it now and it works just fine.” - says an American writer and critic Alan Cheuse, who teaches the fundamentals of the writer’s profession at the University of Mason. The novel has already survived 94 editions, which makes the discussions whether Vonnegut’s books survive himself or not, pointless.

The novel “Slaughterhouse number five”, like many other books by Vonnegut, fell into the so-called list of “harmful” in the US, it was seized from libraries with the pretext of contained in them “obscenities”. This prompted the writer to actively engage in the struggle against censorship. “If some people succeeded in achieving their goals, ideas could not be spread over this country.” - Vonnegut said in one interview. “I have always considered one feature of this country very wonderful out of many, that I can say whatever I want, and any other person can say whatever he wants, and then we will compare all possible views and come to some opinion.”

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Conclusion

Vonnegut wrote funny, at the same time speaking about serious things, says American writer Christopher Buckley. In life he had experienced terrible tragedies: during the war his mother committed suicide; her sister died of cancer, and two days before her husband died in a railway accident; his son had a nervous breakdown. And in 1984, inclined to depression, Vonnegut himself tried to commit suicide. And yet he found in himself the strength and courage to look at life ironically and with humor, to write funny about serious, did not lose the love towards life.

One day he said: "I write every book for years - it all seems to me that I will not finish it ... In general, I do not know what will remain of me and how my children will remember me. The only thing I don't want them to inherit is - I do not want them to live in that darkness, in the depression that my parents lived in. My generation grew up in an atmosphere of wars, destructions, killings and suicides. We need to escape this obsession - get rid of misanthropy, greed, envy, enmity... And I also want my children remembering me not to say: "Yes, our father could perfectly joke, but he was a very sad man..."

On the night of 11 to 12 April, Kurt Vonnegut died in his New York apartment in Manhattan at the age of 84 as he could not recover from a head injury after falling at home a few weeks ago. "One of the

main figures of the American literature of the twentieth century passed away. His books are included into the compulsory reading lists at schools throughout the country." - said NBC. This is not entirely true. Kurt Vonnegut is one of the main figures of the world literature, idol of the youth, a cult writer of the 20th century whose influence on the worldview of post-war generations cannot be overestimated.

"A writer is a hypersensitive cell in a social organism, and this cell must react to those poisonous substances that harm or can damage humanity." - once he said. Though he is not alive, his name and works still reflects the reactions to the threats that can harm the humanity. When reading Kurt Vonnegut's name even fleetly, it is impossible to avoid the association with the war, with his attitude towards the war and its results. His name is a living witness to the destructions and sorrows that war brought to our lives. When the Theater of the Soviet Army staged the "The Wanderings of Billy Pilgrim" based on his "Slaughterhouse number five" in 1976, he sent a telegram to the premiere, in which he asked "to put an armchair in the wings for his soul, because his body has to stay at home...". And the signature was "Kurt Vonnegut, a former soldier of the American infantry, personal number 12102964". He never missed a chance to introduce himself as a soldier who witnessed the cruelty himself and made people bear in mind all the horrible consequences over again [5].

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Hasan A. Mammadov

Department of World Economy and Management,
Nakhchivan State University, AZ 7000, Nakhchivan
University Campus, Nakhchivan, Azerbaijan Republic
hasan_1961@mail.ru

**SECTION 31. Economic research, finance,
innovation, risk management.**

CLASSIFICATION OF INFRASTRUCTURES

Abstract: *The article focuses on the classification of infrastructure. The essence, content and functions of infrastructure are explained. It is shown that the views of world scientists about the classification, essence, content and significance of infrastructures with different functional functioning have never been unambiguous. A group of academics describe them as the production technologies, the production and non-production activities of the population, the interaction of buildings, structures, communications and terrain elements that provide normal development of recycling, while other group economists say that only infrastructure for industrial and coal production industries and so on.*

In the article, the infrastructure is not only a material production but also a set of areas that serve social, market, ecological, international and military spheres. Here is a complete classification of infrastructures, showing each area's infrastructure and their specific boundaries. It should be noted that in order to ensure the sustainable development of the economy, it is important to ensure that all infrastructures are integrated in a comprehensive way.

Key words: *infrastructure, classification, ecology, market, social, production, manufacturing technology, communication.*

Language: *English*

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Introduction

The concept of "infrastructure" is Latin origin. It expresses the combination of infra- "lower " and structure - "accommodation". For the first time, at the beginning of the twentieth century, A. Marshall used the term "infrastructure" to refer to US military facilities and buildings in the 40's. At present, the "infrastructure" has been widely used in the lexis as an economic terminology.

Research has shown that the views of world scientists on the classification, essence, content and significance of infrastructures with different functional functioning have never been unambiguous.

A group of scholars describe the nature and content of infrastructure in regional economics as describing them as interconnections between building technology, building, construction, communication and terrain elements that produce production, production and non-production activities, and normal development of recycling (1, p.280 - 281).

Different approaches to infrastructure

Other group economists consider infrastructure only as an aggregate of industries that serve the industry and the production of cobblestones, and when classifying it, they indicate that roads and their canals, canals, harbors, bridges, warehouses, energy farms, railways, communications, water supply, health and education, primary and secondary education (2).

Some economists regard infrastructure and services as roads, warehouses, transportation, communal, household services and social areas as well as areas and services that meet the needs and needs of the population.

V.V.Vlasov, unlike other researchers, has attempted to show the boundaries of the areas in which they belong, by combining infrastructure with relatively broader classifications (production, social, institutional and environmental infrastructures) (3, p.4). However, if we take into consideration the newly created, formed and existing infrastructure that meets the modern level of civilization and economy,



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we can see the deficiency of this classification as well

In our opinion, unlike this classification, infrastructure is functioning in all spheres and spheres that cover them throughout life activities in a broader sense.

In our country, research works have been conducted recently to investigate infrastructure, textbooks, textbooks and monographs have been written, and the laic researchers have not turned the theoretical and conceptual problems of infrastructures into a complete, complete research object. Professor T.Valiyev was the first and long-term researcher of this field in Azerbaijan. He studied the infrastructure in his economic theories published in various years, as well as in monographs he wrote in various years. He pointed out that the infrastructural approach is related to its material production areas and, generally, to the social production and at the same time the social services, as well as the differentiated activities of the infrastructure in the socio-economic status of the country, in other words, (4, p.14).

The economist scientist T. Valiyev classified Infrastructures as: production, social, communal, and market infrastructure, which develops theoretical issues in accordance with the market economy of socio-economic infrastructure in its essence, classification and significance. This infrastructure has been called a large, large-scale classification of infrastructure, since these infrastructures themselves are also directly indivisible and sometimes third-party subgroups.

Economists M.M.Mahmudov and I.M. Mahmudova, summarizing their findings at the end of the headline "Infrastructure Understanding" at the "Regulation of Socio-Economic Development of Regions" published in 2011, have concluded that they have been able to produce infrastructure and infrastructure, can be divided into social infrastructure "(1, p.281).

Doctor of Economic Sciences, Professor G.P. Juravlyov, in the "Economic Theory, Microeconomics-1,2" textbook published in 2010 the authors distinguished the production, social and market infrastructure while classifying the collective infrastructure. They have not yet commented on other existing infrastructures, but have also shown wholesale trade as an integral part of the production infrastructure (5, p.181-183). A group of experts estimate infrastructure as a set of service areas to improve the productivity of the production process, or a set of service areas to improve the living conditions of the population, while a group of experts

consider the unit as a set of complex areas aimed at normal functioning of the national economy (5, p.180 -181). The list of approaches to the classification of infrastructures can be increased. However, most researchers have failed to properly evaluate the functionality of the infrastructure, their substance and content.

Infrastructures are specialized areas that cover and broaden more broadly, scientifically and theoretically, characterized by the division of operations and other leading areas. Talking about infrastructure, not just the fields that support material production, but also the range of areas that serve social, market, ecological, international, and military must be taken into account.

But even today, various ideas about the essence, content and classification of infrastructure in economic literature continue.

It is clear from the research and research that we have not formulated a single hedge against the theoretical aspects of infrastructures so far by both Azerbaijan and foreign economists.

In the context of modern economic development, we can say that the concept of infrastructure is deeply ingrained. Generally speaking, the infrastructure should mean that the totality of areas that create favorable conditions for the normal functioning of the economy as well as its separate units should be understood.

One of the key elements of infrastructure is the provision of public services to meet all the phases of public recycling: focusing on the formation of mutual relations between production, distribution, exchange and consumption

This is because the infrastructure is considered to be a research object of economic theory.

By the way, when you say infrastructure, the essence of the economic system, its internal structure, comes from the functions it performs in accordance with its essence.

Modern classification of infrastructures

In our view, infrastructure in the market economy should cover a range of sectors of the economy, which interact with each other, from different market segments - production, social, market, international, institutional and ecological systems, as well as the normal functioning of the Armed Forces.

Considering the impact of the national economy on its sustainable development, its functional nature, content and content, the specific boundaries, and the separation of individual infrastructures, which are not included in any economic research, are as follows:

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Table1
Infrastructure Areas considering the impact of the national economy on its sustainable development, etc.

S.No	Infrastructure Areas	Supported Areas
1.	Market infrastructure	Commodity markets: - Food and non-food market; wholesale and retail facilities, domestic service market; transport market; utility market; housing markets; non-production buildings and facilities; fairs, auctions; Labor market: labor markets; Financial market: - capital market; investment market; credit market; Securities market. Exchanges: - stock and stock exchanges, Rental and leasing services, etc.
2.	Social infrastructure	Facilities and facilities belonging to them, objects of social and cultural purpose, all structures of housing and communal services, organizations and enterprises of health care system, enterprises and organizations involved in education and upbringing of children up to school age, kindergartens, tourist organizations, hotels, sports and health facilities, passenger transport, communication services (serving the population), legal counseling services for the population, notaries, etc., created for the effective leisure and leisure of the population.
3.	Production infrastructure	small, incomplete production areas, power transmission lines, fuel tanks, etc., all kinds of transportation, water, land and air transport production-serving communications, water supply, sewage systems storage facilities, etc.
4.	Environmental Infrastructure	Water treatment plants, smoke removal facilities and refineries, river, sea and ocean wastewater treatment plants, waste disposal facilities; alternative energy sources: - sunset, bioenergy generating units, wind and water power plants, etc.
5.	International Infrastructure	International Transportation, International Transportation (Air, Water, Railway and Highway), international air and sea ports, international stock exchanges, trade and market subjects, international information and communications systems and facilities, etc.
6.	Institutional Infrastructure	Customs, tax, financial systems, advertising agencies, auditing organizations, information bureaus, advertising agencies, engineering services, etc.
7.	Military infrastructure	military bases, military industrial and educational institutions, stationary buildings, armored vehicles, communications and information systems, combat techniques and mechanisms that ensure the deployment of armed forces and combat operations.

Note: The table was compiled by the author in accordance with the new classification of infrastructure.

Infrastructure areas and areas covered by them

Market infrastructure. The formation of a market economy in Azerbaijan has led to the transformation of ideas and ideas into infrastructures into a substantial market infrastructure. Market infrastructure consists of a set of activities that ensure the effectiveness of functional activities of economic entities and facilities in the market economy. In other words, market infrastructure is a set of complex areas that embody the functional activities of national economic units that ensure normal functioning of the market and its development. It is the integrity of various institutions

and organizations that serve the activities of different sectors of the economy.

Social infrastructure. A set of areas that directly and indirectly participates in providing people with normal living activities is an integral part of the national economy called social infrastructure. In short, social infrastructure is understood as a set of areas that can help improve the social status of people. In the modern era of civilization, the role of social infrastructure has increased, the scope of activities has expanded, and the quality of services has increased.

The importance of social infrastructure in the national economy is that they affect the re-generation

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of labor resources, which are the main resources of the economy. Social infrastructure is a set of industries and businesses that help ensure the standard of living of the population.

Production infrastructure. Industrial infrastructure is an integral part of the national economy and is a set of fields of science, labor and capital that contribute to the overall development of production by participating in the production process.

Production infrastructure, in turn, is divided into the infrastructures of the fields producing the consumer goods and those producing the produce. It should be understood as a complex of material-technical systems that ensure the integrity of commodities in the production process of industrial and coal products. In accordance with the inventory classification, the infrastructure of the production infrastructure should be grouped into the following: production, material resources, natural resources, energy, finished products; production, workforce or operational resources, production finance and information. So, depending on the areas in which they serve, the production infrastructure is externally, internally and in mixed form. These functions are of great importance to the production process itself.

Environmental infrastructure. Areas that serve to the environmental cleanliness, the prevention of environmental pollution, the health of people, fauna and flora are called environmental infrastructure areas.

International Infrastructure. A set of areas that form the national economy as a whole, and which promote the development of international economic integration, are called international infrastructures. This includes international shipping, international transport routes, airports, international trade and market subjects. Compared to other infrastructural areas, international infrastructure is poorly developed, and some are economical

International infrastructures are not included in the study of infrastructure in literature. However, it

should be noted that due to global changes in the world, economic integration processes, and inter-country economic relations are developing day by day, international infrastructure is also developing. As time goes by, other infrastructure infrastructures will dominate international infrastructure, and will become a large-scale research facility.

The construction of large international infrastructure facilities has already been completed with the participation of Azerbaijan, and some are under construction. Thus, "Great Silk Road", "Baku-Tbilisi-Kars" railway, "Baku-Ceyhan-Supsa" pipeline and others. projects can be an example of this.

Institutional infrastructure. In the market economy, public institutions and organizations that are engaged in regulating the economy are called institutional infrastructures. The most common types of market institutional infrastructure are customs, tax, financial, news agencies, audit companies, chamber of commerce, advertising agency.

Military infrastructure. Military infrastructure is a set of areas for the development of the Armed Forces created to protect the sovereignty, territorial integrity, inviolability of the country and its interests. It includes the military bases of the country, the military industry and educational institutions, stationary buildings, armored vehicles, communications and information systems, combat techniques and mechanisms, which provide for the deployment of armed forces and combat operations.

Conclusion

In order to ensure sustainable economic development in the country, all the infrastructures must be developed in a comprehensive way with innovative development. It may not be helpful to give preference to any of them or ignore others.

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J.A. Insopov

researcher

National university of Uzbekistan

Uzbekistan, Tashkent

kamola_nuz@rambler.ru

**SECTION 13. Geography. History. Oceanology.
Meteorology.**

THE DEMOGRAPHIC STUDY POPULATION OF SOVIET GERMAN, CRIMEAN TATAR AND TURK- MESHETINC FORMER USSR

Abstract: For a long time under Diaspora was understood only jewish, which presented itself unique phenomena. Gradually given term became be used in respect of many other folk since they were actuated migration of the population, but "dissipation" became more quotient by phenomena. Given article reveals the statistical study data of such nationalities as soviet german, crimean tartars' and turk-meshetinc.

Key words: history, police, volunteer, bodyguards, keep public discipline, cooperation, fight against crime.

Language: English

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Introduction

As from 80-h gg. XX centuries study problems national politicians has entered in new stage, connected with proclamation of the final judgement of the nationality question, shaping to new history generality - soviet folk and etc. However, confirmed in decisions convention KPSS, plenum its CK concept "triumph national politicians" did not allow to leave for firmly installed frames. Inveterate methodology compelled the scientist to ignore the integer layers archive document, discordant soviet concept on nationality question. Meantime outside the former USSR already long ago existed and acted the alternative school a historian on Soviet Orient.[1] In work, published in 70-80-th y. XX c., G.Makarovoy, V.Chebotarevov, V.Abduvalieva, A.Ishanova, D.Baevskogo and others, nationality question is considered in generalised type[2].

Materials and Methods

For functioning the third period (1990-e and 2000-e years) typical more high level generalizations, serious adjustment settled stereotype, notional device, address to earlier not studied or weakly designed directions national politicians and interethnic of the relations.[3] But follows to note that generalising work on histories national minority nearly did not appear. Specifically follows to note work S.I.Gitlina [4], saturated rich actual material.

S.I.Gitlin in work "History fates jew Average Azii"[5] reveals about high morality, sincerity and courage of jewish folk; about position jew in moslem world; about life and right jew, their moral and spiritual culture; about appearance jew in region, their histories and upshot. Influence is clearly tracked in work upon life of jewish folk different mode, state device, relationship to contemporaneity with past.

Not derogating importances done researcher of the work, was wrongly value work soviet historian in negative plan solely. They were carried in scientific turn big amount sources, is collected significant actual material, capable to serve under its conceptual-critical re-comprehension to recovering the objective history science.

Thereby, before historian Uzbekistan has got up the problem on development of the study of the demographic processes in history works. The General devil of the studies on histories of the population at the point was consideration speakers to his number, nearly in connection with social process solely and ed by position in economy, without referencing to sphere of the demographic processes and analysis its internal change. In generalising history functioning the country on given period of the information about population happened to extremely little.

At the end 80-th years on problem each of these three folk - a soviet german, crimean tartars' and



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turk-meshetinc - were created sister special commissions under VS USSR.

Listing 1989 has fixed in USSR whole 207,5 thous. turk- meshetinc, of them 106,0 thous. person in Uzbekistan. The Reason by so cutting to reorientations become tragic events of the June 1989. The Mass turkish pogroms in Ferganal's valley have caused then "second wave" their migration from Central Asia, numerically covered more than 90 thous. person. Apropos, only after this at Advice of the Nationalities VS USSR was created commission on problem turk-meshetinc. The Power USSR has taken then official decision on export beside 17 thous. turk-meshetinc that is to say practically whole turkish population, but one only Ferganal's valleys, in row of the central areas of the european part RSFSR, subsequent to they left with places and have left else beside 70 thous. person from the other areas Uzbekistan. As a result and turk-meshetinc themselves has perceived this transmigration as the next forced migration and since time significant their part (beside 2/5) were by itself resettled in more south regions (the Ukraine, North Caucasus, Kazakhstan).

The Process to rehabilitations turk-meshetinc, long years mastered in Central Asia Hungry steppe, goes probably. The Ways their not return on native land, commenced in 1956, lay through Moscow and Tbilisi. As from the end 1956 there went the groups of ten a delegation their public representatives: in Moscow they noded on Tbilisi, but in Tbilisi - on Moscow.

The Pogroms in Fergana's valley and all followed this events have done the position a turk-meshetinc in questions of the reparationses consolidated and hard their 10-y convention, taken place in village Adigyuli Saaymink region Az SSR, has required unconditional return in load; embark; stevedore. If this will not occur, that 70-80 % turk-meshetinc intending were emigrate in Turkestan.

Besides, a part kavkaz folk remained in Central Asia that has brought about formation sort of "internal diaspora" within USSR. Simultaneously this several weakened the demographic press on native land, since each autonomy suffered and continued to suffer from agrarian overpopulation that only added a little more in fire flashed up conflict.

The Disinteration USSR in determined sense has brought about disinteration and many "internal diaspor's", to their crushing between new state, to difficulty, but quite often and to about image and even household relationships: appeared, for instance, russian china, uzbek china, caucasian china and etc. and between them already not formal or transparent, but most that nor on there is persisting interstate and customs barriers. Not with standing trend 80-h years were marked process further nationalities in their title national formation that, opposite, intensifies there demographic press.

For the last 10-15 years growing nationizm on Caucasus, in Kazakhstan and Uzbekistan, Tadzhiqistan already not once put the communes deportation folk before complex choice: that to do? The Variant, inherently, little: 1. Adapt, get used to and remain; 2. Leave in near foreign countries or 3. Emigrate in distant foreign countries, particularly if the question is representative folk, having "history native land", as german, greeks, china, finns, somewhat turk-meshetinc.

The Risks and difficulties of the first variant more or less comprehensible. With the exclusion of realy that german, it is enough problematic in practice turns out to be and the third variant since in miscellaneous country - a parent state are created different conditions for repatriation (however statistics confirms light emigration trends in title countries and beside other subjected to repression folk).

Some folk, which deportation did not concern stright, turned out to be are touched by them obliquely, or compensation: russian, georgians, ossetians, kabardian, avar, licorice and others, were resettled, notwithstanding own will often, on left without care of the land. This was in one's own way normally, since in area of the settling deportation ethnoses' was inevitably formed economic vacuum. If revealed by us for row of the events correlation deportation and compensation resettled populations (five to two) subject to all deportation , but we shall get else 2,4 mln. forehead! In ditto time not accidentally that exactly in area of the former residence deportation folk at the beginning initially 1950-h years were fixed most mechanical outflow populations.

Forced migration have brought about formation "internal diaspora" practically beside each subjected to repression folk (that type "native land" - "place of the exile"). With disinteration USSR and formation on its place 15 independent countries these "internal diaspora" have unexpectedly gained the official international status that had for these folk as negative, so and positive sides.

Conclusion

Today already quite obviously that care from weighted and historically justified decisions fraught the most serious consequence as economic, so and political characteristic. In this connection we shall note two radical changes even in most ethnic to structure postwar soviet and sovet society. This - sharp and ubiquitous reduction jewish and german population USSR in consequence of hitler genocide, stalin's deportation and mass emigration both folk, in 1990-h year particularly.

The Main responsibility for frequentative reduction of the number jew in USSR carries nazi Germany, realized to him on occupied territory USSR mode of the genocide, which integral part



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was. Alongside with actions on destruction jew in places of their residence, was broadly practised their forcible displacement in the other regions - in concentration camps most often and so named "camp of the destruction" (where technology murder was is at most rationalized), but also sometimes and in others, as a rule, more large "ghetto", more often served no more than intermediate station on way in the same camp. In the first place destroyed of the womans, oldster, children's and sick mans: chances of the runnable mans on survival were several above.

Other ethos, the number which for years existence USSR sharply grew shorter - a german. The Absence well-timed and satisfactory decision of the problem to german autonomy has brought about that that former soviet-german population deportation and not-rehabilitation, ed on way of the mass german emigration from Russia and countries to Central Asia. For each of these countries mass departure german population was of great importance, but restrain its not to manage.

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Kuvonch Kadyrov

Independent researcher of
the National university of Uzbekistan
named Mirzo Ulugbek.
alexxonfrank@gmail.com

SECTION 13. Geography. History. Oceanology.
Meteorology.

THE HISTORY OF PUBLIC VOLUNTEER BODYGUARDS (PVB) OR VOLUNTEER POLICEMEN IN UZBEKISTAN

Abstract: In this article it is illuminated the fight against crime in the period of the Soviet Union as well as assistance to the bodies of police in order to keep public discipline and the history and work of volunteer bodyguards who helped.

Key words: history, police, volunteer, bodyguards, keep public discipline, cooperation, fight against crime.

Language: English

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Introduction

During the years of independence, modern innovations based on the best practices of national statehood were introduced in Uzbekistan. As a result of reforms, the internal affairs bodies were reformed and improved. Currently, community members have been deployed as community supporters. In general, this process is closely related to the activities of volunteers in history, but the service is completely different.

Materials and Methods

On February 12, 1959, the Central Committee of the Communist Party of Uzbekistan and the Council of Ministers of the Republic of Uzbekistan issued a decree "On the order of strengthening the fight against alcoholism and regulation of the sale of spirits" [2: 168].

The resolution insisted on drunkenness, and the party and the Soviet authorities, public organizations and working teams should have drunken fights.

This decision was granted to the police with the help of anti-alcohol funds. On March 2, 1959, the Council of Ministers of the USSR adopted a decision on the participation of workers in the public order in the country, promoting the development of a new organizational form of participation in the protection of workers' rights [2: 177].

According to the decree, police assistants have been organized since the beginning of the year to combat crime, such as cruel and bicycle trafficking, as well as participating in public outreach activities

in ports, airports, amusement parks and public places. began. In some provinces, police brigades were reorganized into permanent commissions for the protection of social property.

The allies developed provisions on voluntary laws of public order, taking into account local conditions [3].

These norms have become the legal basis for the organization and functioning of these mass public organizations. The Charter provided that voluntary workers were formed among advanced workers, employees, collective farmers, students and pensioners. Preventing violations of rights, education in all respects is the main criterion for their work.

Before entering the offices of Druzhinets, the red ribbon was designated as "DND" ("Volunteer Folk Druzhina - Volunteer Folk Druzhina"), and the trunk was designated "Popular Squads". They were on duty in public places, patrolled the streets, participated in raids on hooliganism, defamation and negligence. Citizens of the country fiercely fought against those who try to calm down, work and rest.

Looking back on history, the former Soviet regime was abandoned by people who fought with revolutionary barricades with weapons, called the "People's Duty". Since the creation of the Soviet Union in the North Atlantic Alliance, the public has always taken part in the protection of order. In 1918, paramilitary militia groups were created to ensure public order in factories and factories. They are called labor magicians. The Communists, the Young Communist League and prominent workers without a



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party joined the ranks. The first detachments of this community became an example for volunteers in a new era.

When it comes to sources, it can be seen that the number of volunteer volunteers in the United Kingdom ranged from 14 to 1961-1970. [4:76].

Only about 4.5 million. In the Alliance in 1965, in Uzbekistan there were more than 4,700 volunteers, more than 110,000 migrant workers [5].

June 26, 1966 was published Decree of the Supreme Soviet of the USSR "On the strengthening of liability for hooliganism" [6].

This decree was designed to ensure that "there was no place for crime and discipline in the country, and nothing could interfere with the work and recreation of citizens."

After this, alcohol sales were banned in the Alliance and other republican stores, and in some cases time was limited. For example, in the city of Tashkent, the restriction on alcoholic beverages was limited to prevent alcohol consumption. Nevertheless, by the end of 1966, the number of people who were taken to police stations and medical facilities was significantly reduced by the efforts of magistrates. Visitors were registered and taken into account when considering their classes, for free cleaning of streets, yards, public places and construction work.

In addition, police detention centers were imprisoned for fifteen days. The person held in the cell is not allowed to purchase polygamy, beds, cigarettes, food, pay for them now, pay food and food provided by the police. The decree was adopted.

The decree noted that persons who refused to serve a sentence or grossly violated the law were allowed to extend the period of detention for up to thirty days in accordance with the recommendation of the police authorities.

This decree accelerated the activities of migrants. In the police units, the headquarters of Mohammed was established. In this case, regional leaders explained that migrant volunteers are using the basics of mastery, the essence of recently enacted laws and training in fighting and sambo.

Now, along with fighting criminals, hooligans, drunkards and fighters, the police work together with

the police to take part in the passport regime. They fought against the seizure of socialist property and took part in family disputes.

At the same time, the former Central Committee of the CPSU, the Presidium of the Supreme Soviet of the USSR and the decision of the meeting of the Council of Ministers of the USSR, "the main efforts should be aimed at preventing forms of hooliganism in public places" were underlined. In this regard, the further strengthening of the activity of volunteer mongrels was focused on attracting young, energetic, initiative young people.

After that, the number of labor migrants-volunteers increased every year. By the end of 1966, the Tashkent textile factory Iskra (spark), Zvezda (star) company twine factory, a women's team of more than 200, 400 students of the Institute of National Economy, the Institute of Physical, than 900, the Tashkent Medical Institute (medical at the medical faculty employed more than 900 volunteer volunteers, 300 in the faculty of dentistry, 250 in the faculty of pediatrics, 350 at the faculty of pediatrics, now they have released comics such as "Who refuses to do this today", "Satire", "Komsomol Projector", "Boxing Store" and "Tele- oping, "The days of detention". [1]

During these years, the Ministry of Public Order of the USSR created a breastplate for "Dammiy Druzhinnik", and active young people were publicly awarded this award [7].

Conclusion

During the mass events with the initiatives of the magistrates meetings were held at enterprises, organizations, factories, educational institutions, schools and institutions. The party organized propaganda, lectures, interviews with the government decree on combating crime.

Thus, the study of the history of the work of internal affairs and their assistants during the years of independence has become one of the most pressing problems. The reforms and reforms implemented in this system will initially provide the country with peace, fighting crime, gradually realizing the principle "from a strong state to a strong society".

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Maksim Anatol'yevich Usov
assistant teacher,
national technical University
Kharkiv Polytechnic Institute
maxusov@rambler.ru
maxusov1978@gmail.com

Svetlana Petrovna Sudarkina
Professor,
national technical University
Kharkiv Polytechnic Institute
svetsud@gmail.com

**SECTION 31. Economic research, finance,
innovation, risk management.**

PROBLEMS OF COMPLEX ESTIMATION OF INVESTMENT ATTRACTIVENESS OF INNOVATIVE PROJECTS

Abstract: The article deals with the problem of evaluating the investment attractiveness of projects taking into account the action and impact on the project and its economic characteristics of stochastic, random factors of external and internal environment on the basis of expert assessment of their impact and determination of the correction factor

Key words: Evaluation, investment attractiveness, economic efficiency, stochastic factors, risks, correction factor, external, internal environment.

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ПРОБЛЕМЫ КОМПЛЕКСНОЙ ОЦЕНКИ ИНВЕСТИЦИОННОЙ ПРИВЛЕКАТЕЛЬНОСТИ ИННОВАЦИОННЫХ ПРОЕКТОВ

Аннотация: В статье рассматривается проблема оценивания инвестиционной привлекательности проектов с учетом действия и силы влияния на проект и на его экономические характеристики стохастических, случайных факторов внешней и внутренней среды на базе экспертной оценки их влияния и расчета корректирующего коэффициента K кор.

Ключевые слова: оценивание, инвестиционная привлекательность, экономическая эффективность, стохастические факторы, риски, коэффициент корректирования, внешняя, внутренняя среда.

Введение

Одной из главных предпосылок принятия решения о реализации инвестиционного проекта является возможность установления реальной эффективности привлеченных финансовых средств.

Однако, поскольку проекты отличаются друг от друга не только размером инвестиций, но и эффективностью и надежностью получения положительного конечного результата, возникает потребность в ранжировании реальных инвестиционных проектов по определенным критериям. Проведение такой оценки проектов является очень важным этапом при формировании инвестиционной стратегии. От качества результата такой работы зависят не только сроки и эффективность реализации проекта, но и возможность вообще вернуть вложенные средства.

В настоящее время в большинстве случаев такое оценивание проводится с помощью стандартных показателей экономической эффективности, иногда - с учетом среднего уровня различного рода рисков.

Впрочем реальная ситуация в сфере инвестирования и реализации проектов складывается таким образом, что чисто экономической оценки оказывается недостаточно, так как появляются различные обстоятельства во внешней и даже внутренней среде, которые трудно количественно оценить, и которые, как правило, ухудшают ситуацию. Это приводит к срыву сроков, снижению запланированной прибыли, и в целом - к снижению эффективности вложения средств в проект, а в некоторых случаях - и к отказу от его реализации.

Существует еще один важный фактор,



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который надо учитывать при проведении таких расчетов, а именно, их стратегический характер. Такие расчеты проводятся на стадии проектирования, то есть до начала срока реализации проекта, не говоря уже о эксплуатационной фазе процесса. Поэтому очень важным является наиболее полный учет возможных рисков в соответствии с их состав, силы воздействия, возможности их минимизации именно с учетом фактора времени, присущие всем стратегическим расчетам вообще.

Понятие и теоретическое обоснование понятий.

В последнее время в области исследований проектов появилось и разрабатывается относительно новое понятие «инвестиционная привлекательность проекта», которая, по нашему мнению, в состоянии более адекватно отразить возможность оценки уровня эффективности проекта в широком смысле течение всего его жизненного цикла. На наш взгляд, это достаточно новое понятие (оно еще даже не сертифицировано), которое отражает уровень потенциала проекта при его внедрении, то есть, возможность получить прогнозируемую эффективность с учетом всех возможных рисков.

Можно предложить такую формулировку понятия «инвестиционная привлекательность проекта»:

«Инвестиционная привлекательность проекта (ИПП) - это комплексная характеристика проекта, которая может быть определена системой связанных между собой качественных и количественных параметров проекта, позволяет установить соответствие проекта его целям, современным требованиям к проектам, и в целом - возможности их реализации и получения положительных экономических результатов в существующих внешних и внутренних обстоятельствах с учетом возможных рисков».

Сама по себе инвестиционная привлекательность присуща не только предприятию, но и области, региона и стране в целом, так как от уровня инвестиционной привлекательности зависит величина поступления инвестиций, а значит, и возможность реализации планов развития государства.

Инвестиционная привлекательность страны - это совокупность экономических, политических, финансовых условий, влияющих на решение существенных задач государства по развитию хозяйственного комплекса благодаря поступлению внутренних и внешних инвестиций в экономику страны.

Инвестиционная привлекательность региона тождественна понятию инвестиционного климата и включает в себя инвестиционный потенциал региона и уровень инвестиционных рисков.

Инвестиционная привлекательность предприятия - это совокупность экономических, технико-технологических, организационных и микроэкономических условий, при которых существует данное предприятие, и которые обеспечивают тот или иной уровень восприятия им различного рода инноваций и возможности реализации соответствующих проектов.

Таким образом, можно констатировать, что ИПП - это комплексное понятие, которое, в том числе, базируется на наличии субъекта, объекта, так называемых третьих лиц и многих различных факторов, влияющих на процесс инвестирования и реализации проекта на разных стадиях его жизненного цикла.

Субъектом в данном случае выступает инвестор, поскольку он вкладывает свои средства и является, таким образом, движущей силой проекта.

Объект - это сам проект, который предлагается внедрить за деньги инвестора, то есть - субъекту этого процесса.

Третьи лица - это организации и специалисты, которые должны проводить расчеты, оценивать проект, сопровождать его на всех этапах его существования. Сюда можно отнести экономистов, юристов по вопросам инвестирования, логистики, страховщиков, менеджеров и тому подобное.

Факторы влияния включают широкую гамму условий, обстоятельств и положений, регламентирующих весь инновационно-инвестиционный процесс. Они, как всегда, делятся на внутренние и внешние.

Внутренние факторы оказывают прямое влияние на инвестиционную привлекательность предприятия и могут контролироваться ним. Количество факторов не является лимитированным, а выбор наиболее влиятельных факторов или групп зависит от конкретной ситуации на предприятии, а также от целей и предпочтений инвестора.

К **внешним** факторам относятся факторы, которые косвенно, опосредованно влияют на инвестиционную привлекательность предприятия или проекта. Это факторы, на которые предприятия не способны оказывать прямого влияния и регулировать процесс. Сюда можно отнести составляющие макро- и микросреды, которые в значительной степени формируют инвестиционную привлекательность страны, региона или отрасли.

Считая сложности понятия, некоторые авторы выделяют три направления в толковании категории «инвестиционная привлекательность»:

- на основе целей инвестора;
- на основе совокупности различных факторов;
- на базе соотношения доходности и риска.

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Такой подход более теоретический, чем практический, так как на практике инвестору нужно не ряд рекомендаций, которые могут быть разнонаправленными, с разной ценностью и т.д., а один четкий ответ на вопрос уровня эффективности вложения денег в тот или иной проект с учетом всего комплекса имеющихся проблем да еще и в стратегическом разрезе. Поэтому и оценка такого сложного понятия должна также быть комплексной.

При анализе ситуации с целью установления именно уровня инвестиционной привлекательности проекта необходимо исходить из интересов всех участников этого сложного процесса, тем более, что иногда они не совпадают. Например, инвестор заинтересован в сокращении расходов; окружающая среда - в обеспечении экологической и социальной составляющей, что требует определенных и не малых затрат; у поставщиков материалов - свои предпочтения; у производителей и технологов - свои и т.д.

Теоретические подходы.

Именно потому, что «инвестиционная привлекательность» - это сложное, комплексное понятие, для оценки его уровня только показатели экономической эффективности проекта недостаточно.

Инвестиционную привлекательность проекта возможно оценивать с двух сторон:

- Со стороны чисто экономической эффективности проекта с помощью экономических параметров на базе существующих показателей эффективности инвестиций, так называемых сбалансированных показателей: NPV, (чистый денежный поток), IRR, ARR, срок окупаемости и т.д.

- С другой стороны, реализация и успех проекта в значительной степени зависит от наличия так называемых неэкономических факторов, имеющих стохастический характер, действуют в разных обстоятельствах и сроках по-разному, имеют разный состав, направление действия и разную силу воздействия. А самое главное - это вероятностный характер этих факторов, является причиной того, что они условно контролируемы. Понятно, что для получения адекватного результата привлекательности проекта необходимо учитывать всю совокупность факторов - экономических (контролируемых количественных) и неэкономических (неконтролируемых, качественных).

Влияние неэкономических факторов фактически означает, что речь идет о наличии рисков, связанные с проектом и его реализацией, и попытку более или менее адекватно оценить их.

В настоящее время существуют средства учета рисков, основанные на методах математической статистики, математического ожидания, расчета дисперсии и т.д. Это дает возможность получить среднюю величину риска по совокупности факторов. Недостатком таких широко применяемых методов является то, что все расчеты строятся на данных с разной степенью достоверности, а также на укрупненном подходе без детализации конкретных причин.

Идея данного исследования заключается в том, чтобы предоставить оценщикам, экономистам, инвесторам и практическим работникам, которые должны реализовывать этот проект, инструмент, с помощью которого можно было бы оценить влияние стохастических, неконтролируемых факторов и комплексно оценить реальную, а не только экономическую инвестиционную привлекательность проекта.

Полученные результаты.

Для учета действия внеэкономических факторов нами была рассмотрена система таких факторов, которая включает 50 показателей различной природы со случайным характером воздействия. Это означает, что в каждом конкретном случае (проекте) набор факторов влияния будет разный - в одних случаях действует одна группа факторов, в других - другая. Факторы делятся на 2 группы - внутренние и внешние, соответствует их природе. Каждая из этих групп делится на подгруппы.

В группе внутренних факторов 40 показателей - 4 подгруппы, а именно:

- научно-технические - 9;
- технико-технологические - 5;
- экономические - 9;
- финансовые - 11;
- организационные - 6.

Внешние факторы описываются одной группой из 10 показателей.

Каждый фактор имеет свой номер - К_{1,2,3...50}.

Для оценки совокупного влияния факторов группа должна определить наличие влияния каждого из них на проект, который рассматривается, и рассчитать корректирующий коэффициент К_{корр}. Оценка предоставляется только по факту наличия (оценка «1») или отсутствию воздействия (оценка «0»).

Рассмотренные факторы по-разному влияют на выбранные проекты, и задача исследователя выявить влияние этой совокупности на проекты благодаря получению коэффициента влияния стохастических факторов К_{корр}.

Алгоритм проведения такой оценки зависит от задач, которые стоят перед исследователями, аналитиками (рис. 1).

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Если рассматривается один проект, то задача состоит в установлении корректирующего коэффициента $K_{корр}$ для данного проекта, и соответствующей корректировки экономических

оценочных показателей инвестиционной привлекательности с учетом действия внеэкономических факторов.



Рисунок 1 - система выбора наиболее привлекательных проектов на основе комплексного подхода

Если же рассматривается ряд проектов, то стоит задача определения приоритетов при выборе того или иного проекта или построения их последовательности при внедрении - опять же благодаря соответствующей коррекции экономических критериев с использованием значений корректирующих коэффициентов для каждого из проектов $K_{кор.і}$.

В данном случае в качестве объекта была рассмотрена совокупность инновационных проектов промышленного назначения (18 проектов) из различных отраслей промышленности, а именно: машиностроение - 9 проектов, энергетика - 5 и по одному проекту с пищевой, химической, легкой промышленности и

автомобилестроения.

Все представленные проекты являются украинскими. Данные по проектам были взяты в произвольном порядке по отраслям, расходах и сроках внедрения из каталога участников Форума частных инвесторов Украины по 2016 год. Каталог инвестиционных проектов содержит референтный описание инвестиционных проектов в различных отраслях и регионах Украины. Каждый проект содержит краткое описание, информацию о рынке и стратегии сбыта, данные о профессиональном опыте и менеджерские качества инициаторов проектов, другие важные сведения для принятия инвестиционных решений.

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Отраслевое разделение совокупности проектов является принципиальным, так как специфика производства и технологии существенно влияет на весь инновационно-инвестиционный процесс, как со стороны технико-технологических, так и финансовых возможностей.

Кроме отраслевой дифференциации все выбранные проекты были разделены по уровню необходимых расходов на 3 категории. Необходимость этого шага объясняется тем, что в большинстве случаев малые и средние проекты имеют ограниченное влияние на деловое и хозяйственное окружение, так и влияние

случайных внешних факторов здесь будет минимальным. Проведенное исследование подтвердило такое положение вещей.

По объему необходимых инвестиций все 18 проектов, которые рассматривались, были разделены на три группы:

1) малозатратные (до 1 млн. Евро) - 14 проектов: П₁ - П₆; П₇ - П₁₂; П₁₅; П₁₆; П₁₈ - то есть 78%.

2) среднетратных (от 1 до 5 млн. Евро) - 3 проекта: П₄; П₁₄; П₁₇; - 17%.

3) высокорасходные (от 5 млн. Евро) - 1 проект: П₁₃ - 5%. (Рис. 2)

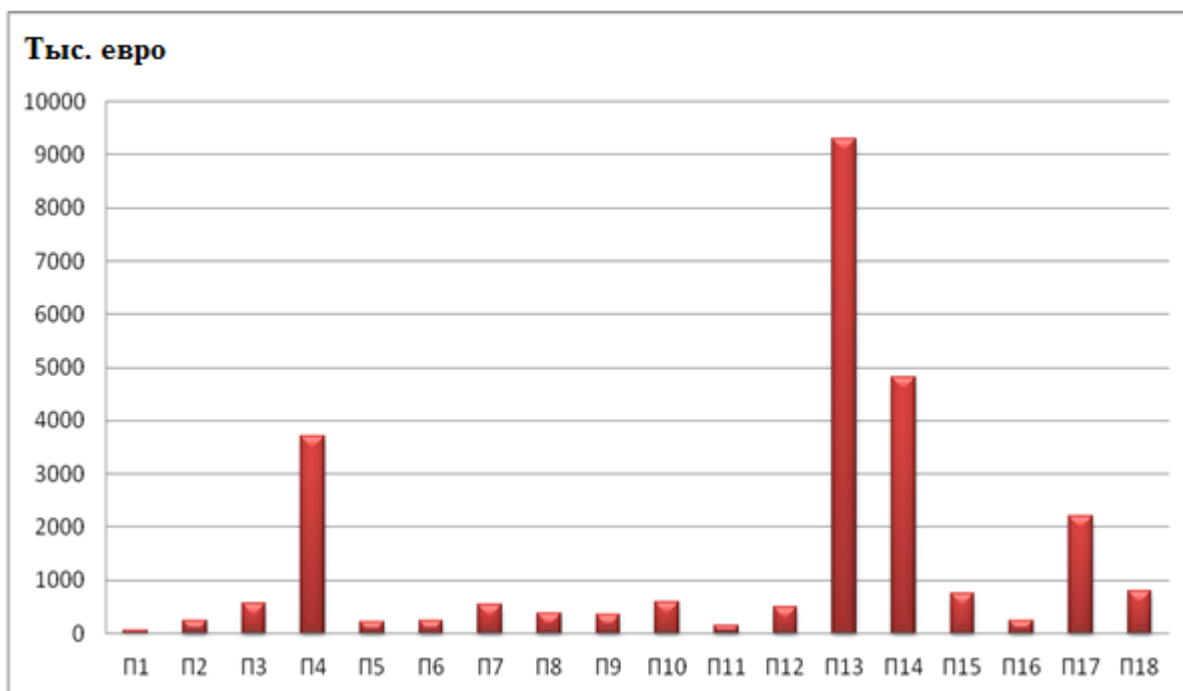


Рисунок 2 - График затратности инвестиционных проектов

Такая специфическая структура проектов в совокупности является весьма характерной для Украины в настоящее время и объясняется трудностями инвестирования вообще, а именно - сложностями и неурегулированностью законодательства, тяжелым инвестиционным климатом, большими рисками институционального характера - законодательными, политическими, социальными и др. Таким образом, область оценки влияния стохастических факторов ограничивается крупными и близкими к ним средними проектами с достаточно большими инвестициями, длинными сроками реализации и в целом - жизненного цикла.

В данном случае разделение проектов по затратам на 3 группы фактически решило эту проблему, так как в группу высоко затратных

попал только один крупный проект по машиностроению (проект П₁₃). Тем не менее, расчеты значений коэффициента К_{корр.} были проведены для всей совокупности и полученные следующие результаты.

Для малых и средних проектов значение К_{корр.} находится в диапазоне 0,15 ÷ 0, 25.

Для высоко затратных и средних проектов, которые ближе к крупным, значение коэффициента К_{корр.} находится в диапазоне 0,25 ÷ 0, 37, причем для одного крупного проекта П₁₃ этот коэффициент имеет максимальное значение, а именно 0,37. Это понятно и логично, так как сложность, большие средства, сроки разработки и внедрения проекта связаны с большими рисками, чем для малых и средних проектов.

Использование коэффициента корректировки К_{корр.} аналогичное этой

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процедуре с любым коэффициентом учета риска.

Если эффективность проекта оценивается по балльно-весовым методом, приемлемо для группы проектов, то величина $(1 - K_{корр.і})$ добавляется как множитель до значения суммарного весового балла проекта.

Расчетная формула имеет вид:

$$Вкор. \Sigma = \Sigma B_i \times \alpha_i \times (1 - K_{корр.і})$$

Здесь $Вкор. \Sigma$ - суммарный скорректированный по стохастической факторами балльно-весовой коэффициент проекта; B_i - балл по i -му показателю в принятой системе балльных оценок; α_i - доля, значение i -го показателя; $K_{корр.і}$ - коэффициент корректировки по стохастической факторами.

Логика полученной формулы в том, что чем выше коэффициент $K_{корр.}$, тем больше риски по стохастическим факторам и ниже суммарная оценка привлекательности проекта и наоборот.

Если же рассматривается только один проект, то на величину этого множителя ($K_{корр.}$) уменьшается прибыль или чистый денежный поток, и, соответственно - все остальные коэффициенты экономической эффективности, связанные с этими базовыми величинами.

Положительной стороной данного метода является его прозрачность и возможность учета значительного количества различных по природе, происхождению и т.д. стохастических факторов влияния на проекты, которые рассматриваются. Кроме того, надо сказать о легкости использования метода - эксперты только фиксируют наличие или отсутствие действия того или иного фактора, не прибегая к более глубокому количественному анализу.

К недостаткам следует отнести все недостатки метода балльных оценок, связанные с субъективностью оценок, весовых коэффициентов и тому подобное.

Что касается недостатков, связанных с фиксацией только факта наличия или отсутствия действия конкретного фактора, можно утверждать, что при более детализированной оценке обязательно появятся ошибки, которые могут снизить качество результата.

В целом надо отметить, что такой метод может быть использован как экспресс-метод для учета возможного негативного влияния стохастических факторов на эффективность и привлекательность проекта.

После получения результата, то есть скорректированной балльно-весовой суммарной оценки проекта, надо провести более детальный анализ действующих факторов и разработать дальнейшую стратегию реализации проекта.

Таким образом, можно сформулировать следующую последовательность действий при использовании данного метода.

1. Оцениваем проект (проекты) по

имеющимся экономическим показателям с помощью балльно-весового метода или просто по действующим параметрам экономической эффективности.

2. Формируется база совокупности стохастических факторов для данной группы проектов.

3. Для этой совокупности стохастических факторов и соответствующей программы эксперты устанавливают значение корректирующих коэффициентов $K_{корр.і}$ для каждого проекта.

4. Рассчитывается значение скорректированного суммарного балла $В_{корр. \Sigma}$ для данного проекта (проектов) или абсолютного показателя экономической эффективности - прибыль или чистый денежный поток, на базе чего принимается решение о возможности его реализации.

5. Проводится анализ действия отдельных стохастических факторов для возможности снижения их негативного влияния на проект.

Выводы.

1. Одной из важных проблем управления проектами является установление их реальной эффективности с учетом действия стохастических (случайных) факторов влияния внешней и внутренней характера.

2. При оценке инвестиционной привлекательности проекта используют, как правило, экономическую оценку с помощью существующих абсолютных и относительных параметров экономической эффективности: NPV, IRR, ARR, срок окупаемости и т.д.

3. Для получения более адекватной оценки предлагается учитывать влияние стохастических, случайных факторов на базе экспертной оценки их влияния по признаку наличия или отсутствия его. Для этого используется соответствующий математический аппарат и программное обеспечение.

4. Для исследования устанавливается открытый перечень стохастических факторов, актуальных для проектов (проекта), которые рассматриваются.

5. Если рассматривается совокупность проектов, их надо разделять по отраслевым и расходными признакам.

6. В результате получают коэффициент корректировки $K_{корр.}$ для данного проекта или каждого проекта по совокупности проектов по рассмотренным перечнем факторов влияния.

7. Полученный коэффициент $K_{корр.}$ - это фактически коэффициент учета стохастических рисков, который снижает уровень привлекательности проекта и, соответственно, суммарную балльно-весовую оценку или показатели экономической эффективности.

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8. Наличие детализированного перечня стохастических факторов позволяет провести более адекватный анализ влияния факторов и на этой базе разработать дальнейшую стратегию реализации, коррекции, отказа от проекта (проектов).

9. Методика оценки инвестиционной

привлекательности проекта с учетом стохастических факторов может быть использована для экспресс-анализа инновационных проектов.

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Published: 19.02.2018 <http://T-Science.org>**SECTION 9: Chemistry and chemical technology****Oleg Ivanovich Yurchenko**Kharkiv V.N. Karazine
National University, PhD, Full Professor of
Chemical Metrology Department,
yurchenko@karazin.ua**Nadegda Petrovna Titova**Kharkiv V.N. Karazin
National University, Researcher of
Chemical Metrology Department
yurchenko@karazin.ua**Konstantin Nikolayevich Belikov**Acting Deputy General Director Scientific
Institution "Institute for Single Crystals" of
National Academy of Sciences of Ukraine
belikov@isc.kharkov.com**Tetyana Vasylivna Chernozhuk**Kharkiv V.N.
Karazine National University, PhD, Associate
Professor of Inorganic Chemistry Department,
tanya.chernozhuk@gmail.com**Oleksii Andriiovych Kravchenko**Kharkiv V.N.
Karazine National University, PhD, Associate
Professor of Chemical Metrology Department
alekseykravch@ukr.net**Tetana Sergiivna Tatarina**Kharkiv V.N. Karazine
National University, student of
Chemical Metrology Department,
yurchenko@karazin.ua**ATOMIC-ABSORPTION AND ATOMIC-EMISSION WITH INDUCTIVE
CONNECTED PLASMA DETERMINATION OF IRON AND
MANGANESE IN CURATIVE CLAYS**

Abstract: Atomic-absorption and atomic-emission with inductive connected plasma determination of Iron and Manganese in curative clays was carried out. It was shown that maximum of analytical signal is getting at using triton X-100 ($\omega = 4\%$) and ultrasound treatment of the analyzed solutions during 20 minutes. By variation of the sample it was established, that systematic error is ambiguous. An accuracy of the results of analysis was checked by the method "injected-found out". Coherence of the results, obtained by two independent methods was estimated by F- and t- criteria. It was proved that run of the means is not sufficient and proved by random scatter. Detection limit of Iron and Manganese was estimated.

Key words: Manganese, Iron, ultrasound treatment, atomic-absorption and atomic-emission with inductive connected plasma spectrometry, green clay, triton X-100, metrological characteristics.

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Introduction

The term "clay" unite quite wide class of rocks of drag nature. It consists of tiny particles of minerals that formed as a result of wind and aqua erosion. Chemical composition of clay is determined by composition of these rocks and is different on various territories. Therefore, clays, mined at different territories, are different too. Because of clays are formed from the compounds of earth crust, its chemical composition is similar: silicates of aluminum, potassium cations, sodium, magnesium, calcium, so on.

Formation of clay is quite slow process: tiny particles of dust, settled on soil surface, penetrate through gravel, sand and in filtration process stick together, forming thin layer, that does not conduct water and stop movement of such particles. So, in such way formation of clay layer (1mm per 3 years) begun.

Green clay contains all of the mineral salts and microelements what we need: Silex, Phosphate, Ferum, Calcium, Magnesium, Potassium etc., and in good assimilable form for human organism. [1,p.200; 2,p.134; 3,p.245; 4,p.254; 5,p.24; 6,p.3].

Express methods of spectral atomic analysis (SAS) is widely used in industry, agriculture, geology and another brunches of science and economy.

Methods of atomic-absorption and atomic-emission with inductive connected plasma spectrometry are universal at analytes determination in many components systems [7,p.596; 8,p.27; 9,p.34; 10,p.152; 11,p.97 ;12.p.432].

The purpose of the work is to determine analytes by atomic-absorption and atomic-emission with inductive connected plasma spectrometry in the samples of curative clays, using modern methods of samples preparation.

Experimental part

An analysis of green clay samples to find out Iron and Manganese was done by atomic-absorption spectrometer C-115-MI and by atomic-emission with inductive connected plasma spectrometer Trace SCAN Thermo Jarrell Ach (USA). For sample preparation an ultrasound bath PS-20 was used. Substances of c.p. qualification were used, triton X-100 ($\omega = 4\%$) standard samples, based on water solutions of metals acetylacetonates with concentration of Iron and Manganese 0,1 g/l (acetylacetonates of Iron and Manganese metals is used as standard ones by a lot of Ukrainian factories). The object of investigation was green clay from Luzhok village, Krahkiv region.

To build calibrated graphs 0,2 ; 0,6 ; 1,0 ; 1,4; 2,0 ml of initial solution was put into 5 volumetric flasks of 10 ml volume, 6 ml of Triton X-100 ($\omega = 4\%$) was added to it. It was made up by distilled water

and mixed. The obtained solutions contains $1 \cdot 10^{-4}$, $3 \cdot 10^{-4}$, $5 \cdot 10^{-4}$, $7 \cdot 10^{-4}$, $10 \cdot 10^{-4}$ g/l Iron or Manganese correspondingly.

For analysis were taken samples from 0,1 to 0,5 g, scaled on electronic scales PA-64. 2,5 ml of saturated HNO_3 was added to the glasses and samples were dissolved at heating. To the wet precipitate 2,5 ml of 1,5% HNO_3 , 6 ml of Triton X-100 were added and it was put in the flask of 10 ml volume. It was made up by acetylacetone and mixed.

Results and discussion

To prepare calibrated solutions, based on SAS, choice of Triton X-100 concentrations was carried out (table1).

According to the obtained data, it was found out that Triton X-100 with ($\omega = 4\%$) makes maximal analytical signal of Iron and Manganese in calibrated solutions.

Choice of optimal time of ultrasound treatment of calibrated solutions is in the table 2.

According to the data from the table, we choose time of ultrasound treatment about 20 minutes.

Calibrated graphs of atomic-absorption determination of Iron and Manganese are on pics 1,2

It was shown that using of Tritone X-100 ($\omega = 4\%$) increase sensibility of atomic-absorption determination of Iron and Manganese in 1,4 times.

Variation of mass of the samples of green clay to found out systematic error was done. (table 3).

Atomic-absorption and atomic-emission with inductive connected plasma determination of Iron and Manganese in analyzed samples was carried out. (tables 4,5)

By "injected-found out" method verification of accuracy of atomic-absorption determination of analytes was done. (table 6)

It was shown that the results has no systematic errors.

Comparison of the results, obtained by two independent methods was done. (table 7)

It was shown that methodic has no sufficient systematic errors, and dispersion of the results is proved at random.

The limit of atomic-absorption determination of analytes in the analyzed solutions was estimated. To do it 20 blank solutions were prepared and analytical signal was measured for it. Calculations are in tables 8,9.

It was shown that found out value of C_{\min} is lower than literature one. [13,p.178]

Conclusions

Using of acetylacetone to extract Iron and Manganese and acetylacetone to calibrate devises leads to identity of analyzed and calibrated solutions.

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The fact gives us possibility to decrease systematic error. So, using of Tritone X-100 ($\omega=4\%$) and ultrasound treatment during 20 minutes also using of acetylacetonates of Iron and Manganese let us to

extract analytes from the analyzed samples totally. Limit of determination of the analytes is less than literature one.

Table 1**Choice of Triton X-100 concentrations**

$\omega, \%$	Mn, mg/kg	S_r	Fe, g/kg	S_r
2	$20,07 \pm 0,25$	0,01	$7,20 \pm 0,18$	0,02
3	$21,12 \pm 0,26$	0,01	$7,66 \pm 0,19$	0,01
4	$22,24 \pm 0,28$	0,01	$8,06 \pm 0,10$	0,01
5	$22,10 \pm 0,27$	0,01	$8,01 \pm 0,10$	0,01
6	$21,85 \pm 0,27$	0,01	$7,92 \pm 0,10$	0,01

Table 2**Choice of time of ultrasound treatment**

T, min.	Mn, mg/kg	S_r	Fe, g/kg	S_r
10	$20,57 \pm 0,26$	0,01	$7,45 \pm 0,09$	0,01
15	$21,54 \pm 0,27$	0,01	$7,80 \pm 0,10$	0,01
20	$22,24 \pm 0,28$	0,01	$8,06 \pm 0,10$	0,01
25	$22,06 \pm 0,27$	0,01	$7,99 \pm 0,10$	0,01

Table 3**Statistics, deals with the results of analysis**

$Y = A + B * X$	I (A_{water})	II ($A_{modif.}$)
A	0.082	0.041
B	51311	61844
Number of points	5	5
Correlation coefficient	0,9997	0,9997
Residual dispersion	0.25	0.25
Dispersion	0.00084	0.00084

Table 4**Variation of mass of the samples of green clay**

m, g	Mn, mg/l		Fe, mg/l	
	$\bar{c} \pm \frac{t_{p.f} \times S}{\sqrt{n}}$	S_r	$\bar{c} \pm \frac{t_{p.f} \times S}{\sqrt{n}}$	S_r
0,1	$0,055 \pm 0,004$	0,01	$0,15 \pm 0,01$	0,04
0,2	$0,11 \pm 0,01$	0,04	$0,29 \pm 0,01$	0,03
0,3	$0,16 \pm 0,01$	0,04	$0,44 \pm 0,01$	0,02
0,4	$0,22 \pm 0,01$	0,04	$0,59 \pm 0,01$	0,01
0,5	$0,27 \pm 0,01$	0,03	$0,73 \pm 0,01$	0,01

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JIF = 1.500	SJIF (Morocco) = 2.031	

Table 5

The results of Iron and Manganese determination by AAC method in green clay (n=5, P=0.95)

Sample	Mn, mg/kg		Fe, mg/kg	
	$\bar{c} \pm \frac{t_{p.f} \times S}{\sqrt{n}}$	S _r	$\bar{c} \pm \frac{t_{p.f} \times S}{\sqrt{n}}$	S _r
Green clay	22,24 ± 0,28	0,01	8060 ± 100	0,01

Table 6

The results of Iron and Manganese determination by AEC-IZP method in green clay (n=5, P=0.95)

Sample	Mn, mg/kg		Fe, mg/kg	
	$\bar{c} \pm \frac{t_{p.f} \times S}{\sqrt{n}}$	S _r	$\bar{c} \pm \frac{t_{p.f} \times S}{\sqrt{n}}$	S _r
Green clay	22,24 ± 0,28	0,01	8060 ± 105	0,01

Table 7

Verification of accuracy of atomic-absorption determination of Iron and Manganese by “injected-found out” method (n=5, P=0.95)

	Content	Injected	Found out	S _r
Fe, mg/kg	8060	8000	1610 ± 199	0.01
Mn, mg/kg	22.24	20.0	42.26 ± 0.52	0.01

Table 8

Comparison of the results of Iron and Manganese determination by AAC and AEC-IZP methods in green clay, stabilized by US treatment, according to Fisher and Student criteria.

Metal	F	S _{1,2}	t _{1,2}
Manganese	1,57	0,064	1,25
Iron	1,02	0,007	1,95

At n= 5, p=0,95

F_{table} = 6,39

F < F_{table}

t_{table} = 2,31

t < t_{table}

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Table 9

An estimation of limit of determination of Manganese C_{min} (mg/l) in clay by atomic-absorption method.

№	A ₁	A ₂	A ₃	A ₄	A ₅	A ₆	A _{cp}	S ₀	C _{min}
1	3	6	1	5	1	4	3.2	0.23	0.003
2	3	2	3	2	3	2	2.5	C _{lit} =0,004	
3	4	3	5	1	3	2	3.0		
4	4	3	2	3	2	3	2.8		
5	1	6	3	5	4	1	3.2		
6	3	2	3	2	3	2	2.5		
7	2	3	1	5	3	4	3.0		
8	3	4	3	2	3	2	2.8		
9	3	5	1	4	6	1	3.2		
10	3	4	1	5	2	3	3.0		
11	2	3	2	3	4	2	2.8		
12	3	2	3	2	3	2	2.5		
13	5	3	1	6	1	4	3.2		
14	2	3	1	5	3	4	3.0		
15	4	3	2	3	2	3	2.8		
16	2	3	2	3	2	3	2.5		
17	4	1	6	1	5	3	3.2		
18	3	2	3	2	3	2	2.5		
19	4	3	5	1	3	2	3.0		
20	2	3	4	3	2	3	2.8		



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Table 10

An estimation of limit of determination of Iron C_{min} (mg/l) in clay by atomic-absorption method.

№	A ₁	A ₂	A ₃	A ₄	A ₅	A ₆	A _{cp}	S ₀	C _{min}
1	2	4	2	3	1	2	2.33	0.19	0.014
2	1	3	1	2	3	2	2.0	C _{lit} =0,015	
3	3	2	3	2	3	2	2.5		
4	2	1	2	3	1	2	1.83		
5	2	4	2	3	1	2	2.33		
6	1	3	1	2	3	2	2.0		
7	2	3	2	3	2	3	2.5		
8	2	1	2	3	1	2	1.83		
9	2	4	2	3	1	2	2.33		
10	1	3	1	2	3	2	2.0		
11	2	3	2	3	2	3	2.5		
12	2	1	3	2	1	1	1.83		
13	1	3	1	2	3	2	2.0		
14	2	4	2	3	1	2	2.33		
15	2	3	2	3	2	2	2.5		
16	2	3	2	1	2	1	1.83		
17	3	2	1	2	1	3	1.83		
18	3	2	3	2	3	1	2.5		
19	2	1	3	2	4	2	2.33		
20	2	3	2	1	3	3	2.0		



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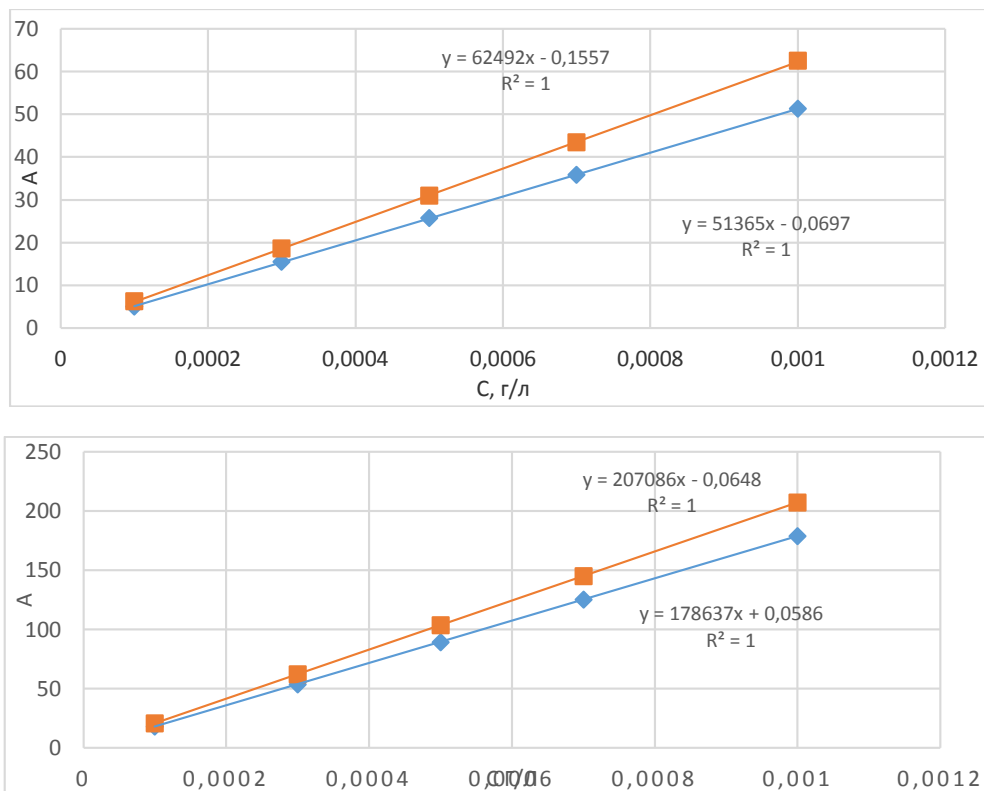


Fig. 1,2 - Calibrated graphs for water solutions of Iron and solutions of Iron, based on Triton X-100 ($\omega=4\%$).

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Darmonjon Kuryazova

National Institute of Arts and Design named after
Kamoliddin Behzod, candidate of historical Science of
the Department of Museology
jasur184@list.ru

**SECTION 13. Geography. History. Oceanology.
Meteorology.**

THE ROLE OF SCIENTIFIC SOCIETIES IN THE COLLECTION AND STUDY OF THE TURKESTAN CULTURAL HERITAGE IN 1867-1916

Abstract: This article comprehensively analyzes the positive and negative aspects in the study and collecting of cultural heritage of Central Asia scientific societies in the period of its conquest, in the second half of the nineteenth century. And also considers circumstances of export of precious resources abroad. It was identified basis for the organization and sequential accumulation of tangible cultural heritage organized and consistent accumulation of wealth of the cultural heritage of Central Asia.

Key words: museum, scientific community, archeology, research, activity, scientist, circle, memory, material cultural heritage.

Language: English

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Introduction

For many centuries, the ancient monuments and cultural heritage of the Central Asian countries have been ignored by scientists. Over the past hundred years, specialists from various fields have been studying these areas and have found that they have lived a highly civilized nation.

It is well known from history pages that from the conquest of Aqmavit in 1853 by Russian Empire to the end of the Kokand Khanate in 1876, scientists from all over the country gathered various documents, manuscripts, books and other cultural heritages. According to the decree of General Governor K.P. Phon Kaufman, the Koran of the Khaleefah Osman was sent to St. Petersburg's Library. It is known that the Russian military expedition in Bukhara Emirate brought 97 ancient manuscripts from Shakhrisabz and Kitab district governors. [1.]. A careful examination and collection of all scientifically important materials for the St. Petersburg Library and Museum was entrusted to an oriental scientist A.L. Kun (1840-1888), a member of the army during the 1873 Khiva convoy. As a result, about 300 manuscripts were confiscated from the library of Khan. Khiva khans have 200 copies of the stamp for making coins, a few seals, khan's throne, 172 copies of coins of Mongols, 3 copies of coins of the Kungrad dynasty, and many

ethnographical items collected and sent to the capital of the empire. [2.] The throne, which was an example of the carving art of the Khiva masters, was sent to the Collection of rare objects of the Armory in 1874. Women and children's clothing from Khiva, gold and silver jewelry were distributed to the Reserve Tsarskoye Selo, art Museum of the promoting companies of St. Petersburg, and the Moscow Polytechnic Museums. Most of the valuables from the Khiva khanate were taken to the Russian State Hermitage and to the Ethnographic Museum [3.].

Materials and Methods

During the end of the Kokand Khanate (1875-1876), about 130 manuscripts on history, medicine, jurisprudence and religious sciences were confiscated. These manuscripts were originally transferred to the Turkestan Folk Library, then to Russia and transferred to the Emperor People's Library [4].

As can be seen from the information above, it was founded in the context of the invasion of Central Asia in order to accumulate material and organizational wealth of material cultural heritage. This process has been officially implemented. Archeological researches throughout Central Asia until the 80th years of the XIX century were random, amateurish, later organized scientific societies and



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clubs, where Russian scientists worked together with the local population to help them find records, symbols and find things.

Collecting various collections of Russian scholars, on the one hand, helped to preserve the historical and cultural heritage of the country by organizing local museums and, on the other hand, to fill the stocks of Moscow museums, libraries, exhibition halls with Central Asian artifacts and manuscripts. A number of precious items were preserved for science because of the establishment of the Turkestan Public Library in Tashkent in 1870 and private collectors' service. The description of Arabic, Persian, and Turkic manuscripts kept in the People's Library was published in 1883 by Y.F.Kall and attracted great interest in the scientific community.

The efforts, the majority of scientific research were a personal initiative by selfless scholars, small bureaucrats. The governor-general has made a very small contribution to the field. Orientalist V.V.Barthold wrote that "studying the ancient culture of the people of Central Asia, preserving monuments is not only useless but also harmful" [5].

As a result, foreign tourists and local antique artifacts are causing collectors to loot monuments and mausoleums. However, it should be noted that in some cases there are positive aspects of the arrival of experts in Central Asia. The Swedish architect, who got acquainted with the architectural monuments of Samarkand, noted in his letter to the Minister of Finance of the Russian Federation S.Vitte, that the city architectural ensemble is of great importance for the world culture and asked to organize the protection and study of these magnificent monuments. As a result, in 1895 some funds were allocated for this event, and the drawing, research were initiated. The photo album "Gur Amir" is published in this period [6].

After the Russian occupation most of the research works are directed to the study of cultural heritage, material values and rational use of Turkestan. The research on soil science of A.Fedchenko, V.Dokuchaev, I.Mushketov and others became the basis of modern scientific disciplines in Central Asia.

Oriental scientist Vasily Barthold founded the Turkestan archeological amateur club in Tashkent in 1895 - the first Central Asian oriental research center. At that time, the word club was very broad, its members did not only archaeological but also serious cultural heritage of Central Asia. Scientists, besides archeology, also study the history, ethnography, geography of the country, and the language of the peoples living in the region [7]. Any amateur who was interested in studying the history of Turkistan could be a member of the circle. In 1886 their number was 47, and by the end of the year it exceeded 100. For twenty years, the members of this circle have been studying, describing and storing the

material cultural heritage of Central Asia, including archeology, ethnography, geography, Turkestan and the surrounding nations, and laid the foundations for the history of Central Asia. It was the purpose of this circle's charter. Among the amateurs of the circle there were scholars from major cities such as St.Petersburg, Moscow, Kazan, and scholars published not only in Russia but also abroad. Most of them knew some eastern languages. One of them, M.Andreev, a member of the Academy of Sciences of the former Soviet Union, was promoted to the Academy of Sciences of Uzbekistan and opened a great route in the Middle Eastern Ethnography. Ye.Smirnov studies the monuments around Tashkent and ancient monuments around the Syrdarya river basin, and publishes the findings in periodicals. It also publishes the "Central Asia" scientific-literary collection and "Central Asian Newsletters" magazines in the late XIXth century [8]. The founder of the circle, academician V.Barthold himself, was an archaeologist. Although he participated in archaeological research, he was an oriental scientist. He notes in his memoirs that along with studying written sources, he has also participated in the study of material cultural monuments, because of lack of scientific workforce [9].

In other words, each member of the circle mentions linguistic, ethnographical, geographical, numerical, archaeologist, historians and others. They were originally an oriental scientist and archaeologist. According to the order of the circle, its activities included: acquaintance with ancient monuments of Turkestan and its surroundings; write their description and enter the archeological card of the country; preservation of archeological monuments; processing of findings and publication of results of scientific researches.

After the first archaeological expedition, V.Barthold developed the concept of the Turkestan archeological amateur circle. It will be made available to industry experts, such as collecting and research. For example, local archaeologists have been collecting historic materials that incorporate archaeological and archaeological historical monuments, and historians in the capital analyzed them using the most progressive sciences, and made unique conclusions. Also, the findings that should be studied in the books are studied in the capital, and information collected through the research of everyday life has been identified on the ground.

According to Baron A.B.Vrevsky, the main task of the members of this circle was to make a scientific study of the history of Turkestan and its surrounding countries, particularly the history of Central Asia. Because, A.B.Vrevsky: "In these regions there lived high-ranking Aryans, and in time they moved to the west. The Oriental tradition has eradicated the traces of the Aryans culture, and our past generations have spread to European countries. Today, our destiny has



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turned us back to the lands of our descendants. Therefore, we have to collect and preserve historical and cultural monuments of these territories.” [8]

Conducted meetings have been completed and protocols are signed. The results of the research have been published in the Central Asian Newsletters since 1896, and in 1898 separate collections. Almost every research work is done within this circle. A military institution dealing with issues of conservation of Turkestan monuments has been engaged in the maintenance and repair work. In 1914, the Ministry of Defense issued ten thousand rubles to support the ancient monuments. By the initiative of the chairman of the circle A.B.Vrevsky, the work on preservation of the Amir Temur Mosque in Samarkand will be carried out. Also, according to his order, the Emir of Bukhara issued a decree on the preservation of monuments.

The history of the Central Asian peoples was attracted by the scientists before the formation of a circus. German scientist Franz Schwartz writes a book titled “Turkestan, the cradle of Indogerman peoples” [10]. The Governor-General of Turkestan, Kaufman invited him to Turkestan as the foundation of the Tashkent observatory as he was an astronomer. He has lived in this region for more than fifteen years and, in addition to astronomy, is interested in the traditions and culture of the peoples of Central Asia, considering all places of Turkestan. He also reads all the latest Russian literature on the history of the ancient peoples of Central Asia. After returning to Germany, he continued to study the history of Turkistan, based on a large collection of books about Turkestan kept in the State Bookstore of Munich. Prior to joining Central Asia, he completes and corrects the information in his book [11]. According to F.Schwartz, Turkestan was the first home of Europeans, and indigenous peoples were formed in its territory in ancient times, and for so many

centuries the migration processes of the Oriental people in Europe, Middle East, and North India have taken place. He also notes that Central Asia is a cult center for German, Celtic, Slavic and other peoples.

Cultural heritage sites in Samarkand attracted the attention of all oriental scholars, collectors, local historians in Central Asia. In particular, I.V.Mushketov, speaking about the Samarkand graveside, emphasizes the value of the Samarkand and its surrounding complexes at the local administration [12].

Creation of museums in Tashkent, Samarkand and Ferghana has been accomplished on the basis of collections gathered on the initiative of scientific societies, scientists and local residents. The services of enriching the country’s monuments in the preservation of sites of cultural heritage are enormous. The prominent cultural figures have been striving to provide the population with information on Turkestan’s cultural heritage, local nature, farm, history and culture through museum exhibits.

Conclusion

As a result of research, scientific societies, scientists have studied the Turkestan region, studied the life of the people of Central Asia, and worked with local intellectuals, representatives of different peoples. N.I.Veselovsky, V.V.Barthold, and A.N.Samoylovich rely on local culture and history in their research and collected the factual material of many countries’ history.

However, due to the lack of attention to conservation and preservation of cultural heritage, some travelers and merchants have seized cultural treasures. Thus, Central Asia’s cultural heritage, material and cultural monuments, valuables, and rare manuscripts were taken to Russia and other countries.

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Zhadra Kozhamkulova

Department «Automation and information technologies»,
Associate professor, Noncommercial joint-stock company
"Kazakh national agrarian university", Kazakhstan
zhadra_555@mail.ru

Mukhit Maikotov

Department «Math and mathematical modeling»,
Master, Kazakh National Pedagogical University
named after Abai, Kazakhstan
mukhit777@mail.ru

Bibinur Kirkizbayeva

Department «Automation and information technologies»,
Associate professor, Noncommercial joint-stock company
"Kazakh national agrarian university", Kazakhstan
bibinur_62@mail.ru

Zhumakyz Chingenzhinova

Department «Automation and information technologies»,
Master, Noncommercial joint-stock company "Kazakh
national agrarian university", Kazakhstan
zhumagiz@mail.ru

Gulzhan Sapieva

Department «Automation and information technologies»,
Master, Noncommercial joint-stock company
"Kazakh national agrarian university", Kazakhstan
sapieva@mail.ru

Venera Kerimbaeva

Master, Department « Information Technology»,
Almaty Technic University, Kazakhstan
kerimbayeva@mail.ru

EXTENSION METHOD FOR LOCATION PROBLEMS WITH DISCRETE OBJECTS

Abstract: In this paper, we propose an efficient algorithm for finding exact stable solutions to problems of optimal allocation of discrete objects in which the constraint matrix could be almost singular, and the basic parameters of the problem could be uncertain. In modeling parameter uncertainty, we consider commonly used distributions; such as normal, uniform, exponential, linear, gamma-distribution, geometric, and Poisson distributions.

Key words: Extension method, resource allocation problem, search algorithm.

Language: English

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Introduction

Modern design engineers often face problems of optimal placement of various objects such as lathes, hospitals, remote computer terminals, airports, computer programs, warehouses, displays, office spaces in administrative buildings, industrial plants, factories, fire brigades, banks, post offices, etc. The

first attempts at rational location and layout of objects were made in the seventeenth century. However, only when the theory of operations research had developed, these problems became subjects of thorough and comprehensive studies. Since placement of objects often involves significant and irreversible material costs, the development of



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apparatus and methods for optimal placement of objects is one of important areas of the optimization science.

Problems of allocating discrete objects are classified as problems of mixed-integer programming (MIP), which are NP-complex problems. Exact solution methods to such problems have exponential complexity bounds [1]. Over the past twenty years, the development of directed search methods such as the branch and bound method (BBM), and creation of sophisticated, mainly commercial, computer programs, addressed the need for solving MIP problems to some extent.

However, BBM is not suitable for large-scale problems. In recent years, a number of methods have been developed that improve BBM. For example, the method of nodal vectors (MNV) has been developing since 1998. For large size problems of high with at least 80 integer variables, the CPU time requirements for MNV are on average two to five times smaller than with BBM [2].

All these methods are effective only if the model of allocation of discrete resources is formulated correctly. In practice, many parameters are often determined approximately which leads to an incorrect formulation of "perturbed" optimization problems. The problem of finding solutions to ill-posed problems. In [4] a method was proposed that first finds the generating system from the original unperturbed optimization problem and then uses the characteristics of the generating system to assess perturbation effects in forming the optimal solution. Although this approach has a theoretical significance, its implementation requires large computing resources, moreover, the method produces only approximate solutions.

In [5, 6], an extension method is proposed that expands the set of feasible values for solution of the optimal resource allocation problem between parallel objects.

In [7] the extension method is generalized for a new class of problems with parallel random flows. In the proposed method, the solution of the original optimization problem is determined by a directed transition to the optimum from a point which corresponds to the solution of some auxiliary problem with an expanded set of feasible values. The computational procedure ensures the exact solution of the problem. In the article, the extension method is generalized to discrete allocation problems with uncertain parameters.

A mathematical formulation of the problem

Consider the following plant allocation problem. Given a finite set of locations where plants could be deployed and a customer list. Deployed plants produce a homogeneous product in unlimited quantities. The deployment costs for each plant; that

is, the total production and transportation costs are minimized. Let us introduce the following notation.

m - the number of possible deployment locations; i is the index of the location (plant), $i \in I = (1, \dots, m)$;

n - the number of customers, j is the customer index, $j \in J = (1, \dots, n)$;

b_j - the j -customer's need for the product; for simplicity, we take $b_j = 1$ for all j ;

c_i - the cost of placing a plant in location i ;

c_{ij} - the cost of meeting the demand of customer j by the plant i (including the costs of production and transportation);

y_{ij} - the part of the whole product to be delivered to customer j from plant i ;

$$x_i = \begin{cases} 1, & \text{if there is a plant in location } i, \\ 0, & \text{otherwise.} \end{cases}$$

The mathematical formulation of the problem is as follows (see [2]):

$$F(x, y) = \sum_{i=1}^m c_i x_i + \sum_{i=1}^m \sum_{j=1}^n c_{ij} y_{ij} \rightarrow \min \quad (1)$$

subject to the following constraints:

$$\sum y_{ij} \leq x_i, \quad i = \overline{1, m} \quad (2)$$

$$\sum y_{i, j} = 1, \quad j = \overline{1, n} \quad (3)$$

$$x_i \in \{0, 1\}, \quad y_{ij} \geq 0, \quad i = \overline{1, m}, \quad j = \overline{1, n}. \quad (4)$$

For fixed values of x_i , the allocation problem takes the following form:

$$F = \sum_{i=1}^m \sum_{j=1}^n c_{ij} y_{ij} \rightarrow \min \quad (5)$$

Subject to the following constraints

$$\sum_{j=1}^n y_{ij} \leq 1, \quad i = \overline{1, m} \quad (6)$$

$$\sum_{i=1}^m y_{ij} = 1, \quad j = \overline{1, n}. \quad (7)$$

$$y_{ij} \in [0, 1], \quad i = \overline{1, m}, \quad j = \overline{1, n} \quad (8)$$

In accordance with the extension method [5], we introduce an auxiliary extended problem, obtained from the original problem by discarding the constraints of the form (6):

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$$F = \sum_{i=1}^m \sum_{j=1}^n c_{ij} y_{ij} \rightarrow \min \quad (9)$$

subject to the following constraints:

$$\sum_{i=1}^m y_{ij} = 1, \quad j = \overline{1, n}, \quad (10)$$

$$y_{ij} \in [0,1], \quad i = \overline{1, m}, \quad j = \overline{1, n} \quad (11)$$

Let us establish a relation between sets Y and Y^p , feasible solution sets for the original and extended problems, respectively. Suppose that the original problem has a unique solution.

Proposition 1. *The set of feasible solutions Y of the original problem (5)-(8) is a subset of the set of feasible solutions of the extended problem (9)-(11), i.e. $Y \subset Y^p$.*

(See [5, 8, 9])

However, their optimal solutions coincide if the conditions of the following statement are satisfied (see [5, 9])

Proposition 2. *The optimal solution of the original problem coincides with the optimal solution of the extended problem only if:*

- 1) the sets of admissible solutions of these problems are equivalent;
- 2) the optimal solution of the extended problem belongs to the set Y , i.e. $y^{p*} \in Y$.

This statement follows from the fact that the objective functions of the extended and of the original problems are identical.

The equivalence of the feasible solution sets of these problems implies the equivalence of the problems themselves and, consequently, of their optimal solutions. Since $F^p = \inf F$, the constraint (6) of the original problem is not binding.

If the solution of the expanded problem (9)-(11) does not belong to the set Y , i.e. $y^p \notin Y$, then $\sup F > F^p$, and one can use the following approach to search for optimal solutions of the original problem.

□ Use the auxiliary problem (9)-(11) for establishing effective limits of the original problem. This reduces significantly the dimension of the original problem, and, hence, reduces computational errors.

□ Use the solution y^p of the extended problem for the directed transition to the solution of the original problem.

For later use, let us also define a set of the following sub-problems of the problem (9)-(11):

$$F_j = \sum_{i=1}^m c_{ij} y_{ij} \rightarrow \min, \quad j = \overline{1, n} \quad (12)$$

$$\sum_{i=1}^m y_{ij} = 1, \quad (13)$$

$$y_{i,j} \in [0,1], \quad i = \overline{1, m}, \quad j = \overline{1, n} \quad (14)$$

The essence of the extension method is that the solution of the original problem (5) – (8) is obtained by the directed transition to its optimal solution from the point corresponding to the solution of the extended problem (9) – (11).

Since the value of the objective function of the extended problem in its optimum point is a lower bound on possible values of the objective function of the original problem, any transition from the point corresponding to the solution of the problem (9)-(11) to another point $y \in Y$ will increase the value of the objective function. In other words, this transition will mean a descent from $-F^p$ to a different value of the objective function. The resulting solution is optimal if the descent in this direction leads to the smallest change in the objective function value compared with any other direction.

We now outline the following general scheme for solving the problem of locating objects by the extension problem (5)-(6) and (9)-(10).

1. Solve the extended problem (9)-(11).
2. Verify if the obtained solution is feasible with respect to the constraints (6) of the original problem. If the solution is feasible, then it is optimal; otherwise, go to Step 3.
3. Select a search direction and a descent step.
4. Find a new approximation to the solution.

Solving the plant allocation problem with the extension method

Suppose that the solution y^p of the extended problem does not satisfy all the constraints of the original problem, and it is necessary to find a transition to a new approximation

$$y = y^p + h.$$

The descent step h is calculated according to the following scheme:

$$\begin{cases} -1, & \text{beginning of descent,} \\ 1, & \text{end of descent,} \\ 0, & \text{otherwise.} \end{cases}$$

Using the results in [9], we state the following lemma on the choice of the descent direction in discrete resource allocation problems.

Lemma. *The point $y = y^p + h_j^* k_l$ is a solution to the original problem of the plant allocation problem (5)-(8) if and only if the parameters j^*, k and l are satisfy the condition*

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$$(j^*, k, l) = \max \left\{ \frac{[\min(c_{jl} - c_{jk}^p), \quad j = \overline{1, n}]}{(k, l) \in N_h^j}, \quad c_{j^*k} \right\}, \quad (15)$$

where J_i is a set of indexes of the sub-problems (12)-(14), the extends solution of which must be changed.

Based on the general solution procedure and the preceding lemma, we formulate the following algorithm for solving the original problem (5)-(8).

Step 1. Find the solution y^p of the extended problem (9)-(11).

Step 2. Verify if the solution satisfies constraints (6). If it does, go to Step 8.

Step 3. Find the set of indexes of restrictions (6) which the solution y^p

$$\left\{ k \mid s_i = \sum y_{ij} > 1, \quad i = \overline{1, m} \right\}$$

does not satisfy.

Step 4. Find possible descent directions from the conditions

$$N_b = \bigcup_{j=1}^n N_b^j,$$

$$N_b^j = \left\{ (k, l) \mid \min(c_{jl} - c_{jk}^p) \mid s_i = 0 \right\}$$

Step 5. Find a set of indexes of sub-problems (12)-(14) that require the transition to a new solution

$$J_n = \left\{ j \mid \min(c_{jl} - c_{jk}^p) \right\}$$

If this condition identifies only one sub-problem (12)-(14), go to Step 7.

Step 6. Using the following relation, find the index j^* of a sub-problem which must be changed first to make the transition to a new solution:

$$j^* = \max_{j \in J_i} \left\{ \frac{c_{j^*l} - c_{j^*k}^p}{c_{j^*k}^p} \right\}.$$

Step 7. Transition to a new solution of the j -th sub-problem (12)-(14).

$$y_{ij} = y_{ij}^p + h$$

where

$$h = \begin{cases} -1, & \text{if } i = l, \\ 1, & \text{if } i = k, \\ 0 & \text{in other cases.} \end{cases}$$

Compute $s_i, i = \overline{1, m}$. Go to Step 2.

Step 8. The resulting solution is optimal. Compute F.

Simulating the plant allocation problem with random parameter values

To simulate the plant allocation problem with uncertainties in the parameters m, n, c_{ij} , we use the methods given in [8]. For example, suppose that the cost of production and transportation c_{ij} is a continuous random variable \square with the density function $f(x) > 0$.

To simulate the discrete random variable m and n , we assume that their possible realizations x_j are distributed in the matrix

$$\begin{pmatrix} x_1 & x_2 & \dots & x_m \\ p_1 & p_2 & \dots & p_m \end{pmatrix}.$$

An algorithm for solving the problem of locating objects with random parameters

To solve the original problem (5) – (8) with uncertain parameters, we formulate the following generalized solution algorithm which is based on the general solution procedure of the extension method and covers the well-known theoretical distributions such as normal, uniform, exponential, linear, geometric, the Poisson, and gamma distributions.

Step 1. Input parameters defining distributions of c_{ij} .

Step 2. Draw values of z .

Step 3. Choose distributions for m and n , and ensure the following conditions:

$$P\{m = k\} = \frac{\lambda^k}{k!} e^{-\lambda}, \quad P\{n = k\} = \frac{\lambda^k}{k!} e^{-\lambda},$$

$$P\{m = k\} = p^* (1 - p)^{k-1} = p_k,$$

$$P\{n = k\} = p^* (1 - p)^{k-1} = p_k,$$

Step 4. Depending on the results in Step3, compute the values of m and n according to the formulas: $m = n = S$, where S is the number of events happening with probability p ,

$$x_j = \text{Integer} \left[\frac{\ln Z}{\ln(1 - p)} \right] + 1,$$

$$x_j = \text{Integer} \left[\frac{\ln Z}{\ln(1 - p)} \right] + 1,$$

where $\text{Integer} []$ stands for the integer part of the termin brackets.

Step 5. Choose the distributions of c_{ij} . Verify the following conditions:

Step 6. Depending on the results in Step 5, compute the values of c_{ij} using the formulas

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$$c_{ij} = m_x + \sigma_x \left(\sum_{l=1}^{12} z_l - 6 \right),$$

$$c_{ij} = \min + z(\max - \min), \quad c_{ij} = -\frac{1}{\lambda} \ln z,$$

$$c_{ij} = \frac{2}{\lambda} (1 - \sqrt{z}),$$

$$c_{ij} = -\frac{1}{\alpha} \ln(z_1 * z_2 * \dots * z_k),$$

$$i = \overline{1, m}, \quad j = \overline{1, n}.$$

Step 7. For given m , n , and c_{ij} use the extension method described in Section 2 to find the solution of problem (5)-(8).

Application

$$f(x) = \frac{1}{\sigma_x \sqrt{2\pi}} e^{-\frac{(x-m_x)^2}{2\sigma_x^2}},$$

$$f(x) = \frac{1}{\max - \min}, \quad x \in [\min, \max],$$

$$f(x) = \lambda e^{-\lambda x}, \quad x \geq 0, \quad f(x) = \lambda \left(1 - \frac{\lambda}{2} x\right),$$

$$f(x) = \alpha^k [(k-1)!]^{-1} x^{(k-1)} e^{-\alpha x}$$

The results of this study were used to develop a control system for one of the largest metal producers in the world, the Ust-Kamenogorsk Lead and Zinc Plant which is structured into an extensive network of sequential and parallel processes [10]. The designed system controlled the sulfur acid production process which had five different sequential production phases taking place in dry filters, drying towers, wet filters, absorbers and contact devices. Each phase utilized from 4 to 10 parallel units with nearly homogeneity of the parallel processes. The resulting constraint matrix of the formulated model is nearly singular, and it has a high degree of multi-co-linearity (see [11]), which causes

solution instability and a low degree precision of obtained solutions. The application of the extension method with uncertain parameters gave a solution with the error margin of less than 0.05%. Traditional optimization methods have 15% error margins, and they gave solutions that were unacceptable to the plant administration. Thus, the practical implementation of the method demonstrated that, in contrast to other traditional optimization methods, the proposed procedure for solving optimization problems of object placement allows to find accurate and stable solutions even when the constraint matrix is close to being singular.

Conclusions

The results of this study were used to develop a control system for one of the largest metal producers in the world, the Ust-Kamenogorsk Lead and Z in Plant, which is structured into an extensive network of sequential and parallel processes [10]. The designed system controlled the sulfur acid production process, which had five different sequential production phases, taking place in dry filters, drying towers, wet filters, absorbers and contact devices. Each phase utilized from 4 to 10 parallel units, with nearly homogeneity of the parallel processes, the resulting constraint matrix of the formulated model is nearly singular, and it has a high degree of multi-co-linearity. (See [11], which causes solution instability and a low degree precision of obtained solutions. The application of the optimal method with uncertain parameters a solution with the error margin of less than 5%. Traditional optimal methods have 15% error margins and they gave solutions that were unacceptable to the plant administration. Thus, the practical implementation of the method demonstrated that in contrast to other traditional optimization methods, the proposed procedure for solving optimization problems of object placement allows to find accurate and stable solutions, even when the constraint matrix is close to being singular.

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Etibor Yadgarovna Mirzanazarova

Senior scientific research of National Institute of Fine art
and design named after Kamoliddin Behzod

jasur184@list.ru

SECTION 15. Decorative and fine arts.

TO THE PROBLEM OF LEARNING AND INVESTIGATING HISTORICAL MILITARY DRESSES OF UZBEKISTAN

Abstract: *The ancient civilization on the territory of Central Asia and before us the hearth of civilization are a vivid proof that the formation of Uzbek clothing with its roots go deep antiquities. With the help of the found monumental casting of painting in the archaeological sites of the 17th-18th centuries, the specific quality of each region and the military garments were examined by witnesses.*

Key words: *military dresses, history, national, customs, evolution, ritual, genesis, ethnic, style.*

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Introduction

Artistic legacy of people of Uzbekistan has a rich and diverse history, which goes to the depth of many centuries. Material and spiritual culture's unique monuments of the past always attracted an interest all over the world. Imperishable creations of architects, artists and skilled craftsmen who were in different periods are supposed to be an invaluable contribution in treasure of Culture and Art of Uzbekistan, and also of world civilization.

Getting independence by Uzbekistan strengthens an interest relating to own national history, to national values, to traditional culture, to the learning and revival or regeneration which has a special meaning to the State, and they are considered to be one of the main and essential factors of modern culture development and a formation of a new social mentality and mind. "We must learn how to be carefully skeptical about cultural sources, which always give an opportunity to the widest layers, which supposed to be the best example of classical and modern culture". [4] The history of clothes from ancient times till nowadays is considered to be a mirror in which a history of humanity is reflected. Historical dress was formed and confirmed within many centuries and became an important sign in the process of evolution, based on which we can judge and think about habits, customs, rituals and life style of people in each period of life. Traditions which scale to the genesis of people are reflected in a dress, and also its ethnic history; it shows social

relationships in community on different stages; some elements of ideology- religious norms and ethnic requirements. At the same time, design, composition, colorful harmony, decoration of dress make it special and unique work of art, which has its distinctive principles of artistic composition from others, which are changed from time to time. The dress, which connected with a person more than other types of art, is supposed to be a realization of esthetic ideal and artistic passion, so that "Person is always considers himself as a artistic character based on a notice of one of the most popular investigators of dress history M.H.Mersalovoy-which is relevant to ethnic tastes and imaginations" [6]. Because of that the dress is on boundary between some of sciences: history, ethnography and history of artistic craft.

Materials and Methods

Khorezm was an independent state, which kept its own independence within a long period of time and it is still remained a single region of Central Asia which is cannot be conquered by Greeks. It witnesses about existence of powerful, well equipped army. Undoubtedly, if a state has a powerful, well equipped army it will be reliable and secure from an onset of an enemy. Repeated incursion of nomadic tribes, Ahemenidov and the Hellenistic period empires lead to some changes and were the reason of that big attention started to be paid for military deals and forces and it affected on the development of Military Dresses and Arming.



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Based on historical sources, it is revealed that army of Khorezm was divided into two main parts, namely horse and foot. And it is confirmed by Gerodot and he says: "They fight on horses and who they on foot exactly know both methods of War fighting" [3]. Khorezm horsemen were popular everywhere. They were different from others with their power and heavy arming. Maybe that's why; an appearance of a horseman is considered to be a central appearance in Khorezm Art? It can be seen on coins, ceramic flasks, and also on ancient Khorezm cup, which is called Anikov dish [5].

Images show that horsemen were dressed in caftan which means males' clothes, which covers a top part of hips. Trousers are not wide, below knees which are on high heels. As on a high relief on the north wall in the "Hall of Soldiers" in Toprak-Kala. Over the caftan plate and scale's armor was wearied in order to cover the top part of caftan. Some imaginations about how well can look Khorezm's plate armors, gives us a notion about sculptural trunk of soldier in a coat of mail which consists of accommodation number 8 which is situated in Toprak-Kala and mentioned meal.

Apparently, this is a long leather dress with metal plates, which are embroidered on it, and at the same time it will be relevant to mention that the form of plates is vary constantly by saving monotony in armor of each soldier.

As an evidence of existence of metal plate armor in Khorezm can be iron scales from coat of mail from accommodation number 89 in the same palace. The plate is rectangular with a round down end. The length of it is 5.9sm, the width is 2.8sm and the thickness is 0.3sm. in the middle of it there are two main small apertures for attachment. Almost the same plate of some small size was founded in Khorezm in a town known as Kunya-Uaz [8].

Scales dress, or coat of mail, were of two types: iron one (based on blue painting of soldiers' sculpture in royal palace Toprak-Kala), and with glass plates, which were put on bronze gilded plates, and after that the corners were attached by iron brackets on the leather. Glass and bronze plates which were founded those ancient times with iron brackets in one of the accommodations of Toprak-Kala confirm such kind of way for attaching plates. Metal plates are thin (1.5mm) they are square (3.5X3.5sm) plates. They are made from lists of bronze and were gilded. Glass plates with their form and size are close to bronze one. These findings are considered to be a witness about that Khorezm was a sign of glass production.

Moreover, other objects of head dress were decorated with such plates. For instance, belt. Waist-belt collections from clear glass must be look very effective on a gilded basis. They are considered to be as a specific decoration of Khorezm soldier, so that to find analogies for such kind of plates was impossible. In this relation, it is interesting to

remember that Gerodot and Strabon noticed gold belts of "Khorasmiyev" [3]. It is obvious that, these belt collections are related to them. Perhaps, these belts were a distinctive indication of Khorezm aristocracy. A good illustration of this is Anikov's dish on which you can see three horsemen who are illustrated with a glided belt, with a help of which it is possible to differentiate the leader and commander, but others without him.

Social differentiation is noticed by other objectives of soldier's uniform as well. For instance, head-dresses. Soldiers wore conical and more complicated form helmets, which had a triangle projection in the middle of that. But at the back-there are some objects from chain mail screen. It will be relevant to mention that, this head-dress plays a vital role in Khorezm's iconography. Perhaps, it can be seen on a leader from Anikov dish, but also on statuettes from Koykrilgan-Kala and Janbas-Kala. Thus, such kinds of helmet or hat are considered to be a characteristic feature of some suggested individuals. Analogical head-dress can be seen on statues of Soldiers' Hall from Toprak-Kala. Moreover, all of them are interconnected with each other by one special feature and detail: half-moon decorates everything. Perhaps, it meant a title, a name or may be a soldier in a hat with a half-moon which described a view of some divinity? Because a half-moon is a characteristic symbol of Soldiers' God in iconography of Near, Middle and Far East folk.

Round disks and also toothed diadem had many distinctive signs and features, which decorated many Khorezm head-dresses. Head-dresses of many soldiers were more simplified further. They introduced by themselves a low hat which was similar to Chugurma –which is Men's' hat of modern Khorezm. There is a supposition, that it was also decorated by some metal details. Anyway, a plate with a festoon edge, which has a form of rhomb, but also traces of design in the form of star, makes many people to think about it and it is saved on the sculpture of soldier.

Perhaps, only kings and leaders could decorate head-dresses, for instance, royal guards, whom we can see in "Hall of soldiers". Statues of horsemen or guardsmen are located between big sculptures in upper part of the wall which highlights small size and indicates more low social position. So, their dresses are more humble and modest: caftan is short and doesn't have a fur. But the most interesting thing is faces of those soldiers, undoubtedly, which illustrate Guards of Khorezm Kings. These faces of individuals have brown paint, big noses and highlighted lips which attract attention of each person. S.P. Tolstov, who notices this special type of individuals' faces, suggested that they are slaves who are known as foreigners: "It is, undoubtedly, a special type of Negro people, which is considered to be a document for investigation a question about the

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structure of Armed Forces, on which the power of Khorezm Kings relied on. It seems that, their guard is set form far strangers- or from East India, which had a connection from the side of Khorezm people, who supported this link from the period of Kushan. Or from the farthest East Africa” [1]. Evidently, it is revealed that it was beneficial for kings to find different sources of Armed forces, which are separated from the folk and which can resist in any situation to it, outside of the country and to fill an army with people, who are not connected with some local societies, which depend on a King [10].

Excessively, it is typical that Negro soldiers have a weapon in their hands: they hold spears and shields. Spears were very widespread type of weapon in ancient Khorezm. Image of horseman can be an evidence for that with spears on coins, ceramics flasks of that time. Based on a founded tip, in one of accommodations in Toprak-Kala, it was 4gr, but its length constituted 22sm. Such kind of spears can be founded on Anikov dish.

There are big round shields behind of soldiers from Toprak-Kala, and based on a style, they were weaved from the reed; sometimes on the shields there were illustrated palms- as a soldier on Anikov tower.

Totally unique complex are presented by bows. They are big, at around 160sm. Bows were of complex structure, slicked from different layers of trees, also they were with bone facing in middle part and also in the corners of it. The basis is a shaft of bow- was with wide sides.

Tree which is called Zelkova was a tree from which a majority of bows were produced and this tree is from ulmaceae family. Timber of it is excessively tight, it is always was appreciated for making fakes, especially which were easily susceptible to the impact of drought and humidity, so that it wasn't fragile and didn't give any cracks. It occupies the first place with its strength, and even dominated the oak-tree.

Bone blunders were made from antler, which inhabited in Central Asia those times. The right side of blunders was constantly grinded, and backside always saved its natural roughness for the best splice with a wood basis.

For splicing different parts of bow one specific and very effective glue was used. Scientists of HAEE, who investigated these findings, consider that it was glue which was produced by inhabitants of different regions and it was made from inwards of fish, and this information was based on a report of Klavdiy Elian.

In general, the bow of complex structure can be considered as a characteristic type of weapon for Khorezm. Already founded bows in one of the accommodations of Toprak-Kala confirm these data.

Naturally, it is obviously seen that people wore bows on the left side and the quiver which had a

trapezium form on the right side. Horsemen and Soldiers of Khorezm had such type of quiver which can be seen from Anikov dish on a silver cup number 46 from the collection of Y.I.Smirnov [2]. Based on these monuments and statues it is possible to create its appearance. But it is difficult to say about what kind of quiver it was made, because among all remnants which were investigated and founded by archaeologists on the territory of Khorezm, only down side of quiver was kept. It consisted of wood whetstone with round ends which had a length of 17.7sm, width of 4.3sm, thickness of 2.7sm. A bottom was covered by bark which was on 5sm.

Existence of lid is a specific feature of Khorezm quiver. Perhaps, it is connected with that Khorezm people wore quiver with arrows to the upper side. Initially the arrows were without any lean and help, which was a reason for the development of down side of quiver.

The most essential part of whole Khorezm soldier complex was represented by arrows. It is justified by multiple findings of arrows on the territory of Khorezm. Based on these findings it will be relevant to mention that these arrows consisted of tip and shaft. Tips of arrows can be divided into two groups, namely big and small one. The first ones' length was 3.6sm; the width of a head part was 1.2sm. The length is 0.5sm. The length is 1.6sm, and diameter is 0.4sm.

Big ends have the length from 7.6sm to 8.1sm with a length of a head main part from 4.8sm to 5.5sm and width from 1.4 to 2sm, the length of arrow head ends is from 2.3sm to 3sm. The main part of a head part has a triangle form with a length of 0.2-0.4sm [8].

Shafts of arrows were made from rush, which had two slicked wooden plants from poplar wood. Connection of wooden and rush parts linked together had a winding, which adjusted a plumage, which contained two feathers. And for winding mostly tendons were used [8].

In Toprak-Kala were founded arrows and bows which had red and black paintings. May be it is a marking sign?

Actually, it is difficult to speak about the length because of not totally saving it. Scientists of HAEE, who conducted excavations in Toprak -Kala, consider that the length of arrows was about 1m by taking into consideration the length of tip and arrow head and plumage of it.

Also Khorezm Soldiers were armed with long straight swords which had a crossed sword-hilt with round and figure make up for swords. Such kind of swords can be found and observed on Anikov dish.

Moreover, one of the most widespread types of weapon was gilts or in other words cannon-balls. They had round and cubic form, which was made from clay and stone. Diameter of gilts was from 4.5sm to 7.2sm, weight about 238gr. Mostly these

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giltas can be observed on many monuments of ancient Khorezm and other districts of Central Asia. In addition, about usage of this kind of weapon in Central Asia not only archaeological, but also written information was kept .

All weapons Khorezm people created themselves. Findings from Toprak-Kala support this information, because only this place is supposed to be a territory where the masterly of bows, arrows, spears .giltas was found. Khorezm was very popular or the production of bows. "Bows, which can be used by the strongest powerful people, are produced in Khorezm"- Makdasi wrote it [9].

Swords and other craft were made from copper. It is supported not only by archaeological findings, but also by information from the text of Gerodot: "They (horasmi) fight with bows and giltas, armed very simply. Everything which is necessary for the production of all craft is made from copper" [3, 7].

Conclusion

Copper was also used for chest coat of mail for horses, as it can be seen on Anikov dish. Due to this an army had only minimal losses in war. Such strong group of soldiers dressed in coat of mail blouses with

horses was very confident in getting a victory in different fighting's. If even an enemy reached Khorezm soldiers they were very resistant and reliable and overcome all barriers on their way those times.

Thus, Khorezm military dress represents unique complex, which gives information about historical and military-political position of ancient Khorezm. It was very powerful and independent state. And could save its independence owing to a powerful and reliable army, which was divided into horse and foot one.

An arming in Khorezm played an important role and occupied an essential position those times. Military dress was very comfortable, which enabled to move without any difficulty and restraint and was different with its social indications and type of army.

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Hasan A. Mammadov

Department of World Economy and
Management, Nakhchivan State

University,

Nakhchivan University Campus,
Nakhchivan, Azerbaijan Republic

hasan_1961@mail.ru

**SECTION 31. Economic research, finance,
innovation, risk management.**

THE IMPROVEMENT OF INFRASTRUCTURES USING THE LEADING WORLD EXPERIENCE

Abstract: In the article, research is underway to improve the infrastructure of the country by ensuring the sustainable development of the Azerbaijani economy and the preparation of infrastructure projects and the use of advanced world experience. For this purpose, advanced practices of the USA, France, England, Turkey, Russia, Kazakhstan, Belarus, Sri Lanka and Malaysia are on the foreground. It is noted that, based on the best international practices, infrastructure, management, development and perfection of form, and other forms of public-private lease, joint venture and industrial areas (neighborhoods) could be useful in the application forms. At the end, studies are summarized and recommendations are made to eliminate existing problems and improve the development of infrastructures affecting the sustainable economic development of the Republic of Azerbaijan.

Key words: advanced world experience, public-private form, rental, joint venture, industrial areas, industrial neighborhoods.

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Introduction

As well as in every country in the world, purposeful measures for the perfect preparation of infrastructure projects and the organization of their solution are of particular importance in ensuring the sustainable development of the Azerbaijani economy. As a result, since 2004, the Government of Azerbaijan has adopted a series of state programs for the sustainable development of the economy. In each of these state programs, the creation, development and improvement of infrastructures, along with other areas, is on the foreground.

Research shows that the implementation of infrastructure projects over the past 13 years by local and foreign financial sources of investment has been involved in a considerable amount. As a result, since 2004, restoration and reconstruction of infrastructure has been begun in all regions, production and social facilities, infrastructure facilities serving them have been created, and this work is still being continued today (Perry, 2010).

Recent global economic changes, including a decline in the aggregate demand in the international market over the aggregate supply, the fall in world oil and oil prices, and the decline in international trade have led to stagnation in the global economy.

The severe consequences of the global economic crisis have not yet been overlooked by the Azerbaijani economy. However, in order to minimize the impact of the current situation on economic development and to maintain sustainable development stability, it was important to develop the domestic market through local resources and to ensure the implementation of substantial infrastructure projects, the development and improvement of existing infrastructures.

It should be noted that the construction of modern, high-quality and large-capacity infrastructure projects is carried out primarily by the state in economically developed countries. In the course of implementation of infrastructure projects, first of all, work is being done to reduce the demand for investment, and after these costs are identified, these costs are paid by the state (Armenia et al., 2017).

Infrastructures are field of science, capital and labor. Infrastructure does not produce a product, but actively participates in the economic process, reduces the cost of the product, improves its quality, and affects the payment of the consumer demand as soon as possible. Although infrastructures fulfill important functions in economic activity, they do not have the



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ability to directly repay funds for their creation and development. However, the government, knowing the nature of the infrastructure, uses funds from the budget, and allocates funds for the creation and development of infrastructure that is in urgent need. If this work is carried out continuously, it will affect the macroeconomic balance policy in the country and may result in the deficits of funds allocated to the development of other sectors. Therefore, in order to ensure the elimination of such cases using the best practices in infrastructure development and improvement can be made. The most important of these is the use of public-private partnerships in the creation and management of infrastructure, as well as the best practice in their improvement.

Researching show that cooperation between state-private enterprises has been widespread in the practice of leading world countries in recent years in the creation, development and improvement of infrastructure, which is a region of labor and capital. Depending on ownership, property responsibility, who is in charge of management, the level of local authorities and private ownership, they act differently. However, despite what form they perform, the state authorities always keep their control function in their hands.

In some cases, the operation of the infrastructure division of labor in the state administration features in their design, construction and other works are entrusted to the private sector. In the other case, private partners undertake the financing, utilization and management of fixed assets. While investigating the experiences of advanced countries of the world to improve the infrastructure, it became clear that the representatives of public and private sector infrastructure services do not bear the same responsibility.

In many developed countries, the funds allocated by public-private partnerships are collected in a single central unit. Each manata used is strictly and bi-laterally controlled (Bazhenov, 2012). As a result, infrastructure projects completed at the end of financial costs and loss or with minimal losses. The majority of such projects the infrastructure service costs maximum approximation to the real costs. The cost of the project is paid for by the user with the help of this project, which protects the companies.

Features of infrastructure development in developed countries

Funds allocated to infrastructure, including community-service infrastructures, roads, links and parks in many major US cities, are funded by new users. For this purpose, the Development System (System Development Charge, SDC) operates in the administrative-territorial area of each settlement. Through this Development System, cash collected from residents is spent on improving people's social

welfare, including creating, developing and improving infrastructure that serves people.

During the study of France, it became clear that, while implementing a financially viable infrastructure project in France, revenues were identified by allocating funds between authorities and operators to identify new funding sources and use them in the creation, development and improvement of infrastructure. This reduces the state budget from the heavy budget during the creation of infrastructure, or reduces budgetary costs in that direction.

In France, a fund of fundraising for the development of the system is being created and utilizing it to develop and improve the utility services and other infrastructure services.

In France, the use of the service infrastructure, improvement and increase of efficiency are important issues. For example, the use of the water supply infrastructure, and timely payment of funds, abuse of the rules and so on written contracts, as well as items. According to these substances: - "... the connection of all objects to the main line during water supply must be combined with the meter;" "Costs of the first connection are paid by the subscriber;" or "If there is a distance between the object and the main water line (n), the connection to the main line is combined with payment by the subscriber in any way".

There are serious concerns in the England when privatizing state-owned enterprises, including state-owned infrastructure (Verreault-Julien, 2017). Thus, when privatization of water supply infrastructure, one of the largest infrastructure facilities in the country, serious difficulties have arisen because of the fact that revenue from water supply has not yet been established and the precise mechanism for calculating ownership between owners and consumers. It required a strong, independent and decentralized organization to resolve the issue. Financial sources of such an organization should be based on revenue from water supply. Even though the water supply enterprise was ineffective, it had to operate. There are many losses because of investments in this sector is considered to be unsatisfactory.

Britain's experience gives reason to say that privatization of infrastructure facilities, even sophisticated, well-developed institutional areas of the state, though, so you have to be careful and cautious. Making a hasty decision in this area can lead to suffering.

Reforms in water supply, construction, transport, sewerage, utilities and other infrastructure areas and improving these areas require significant responsibility and longer time (Gokzhayeva and Ponomareva, 2014).

Based on advanced international experience, other aspects of the state-private infrastructure

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management, development and improvement of infrastructure are as follows:

1. Rent;
2. Joint venture;
3. Industrial areas (neighborhoods).

Lease is property, land and other natural resources that are contractually contractually payable and have the right to use them. It is allowed in all areas of the lease and can be applied to the property of all forms and types of property.

The right to lease the property belongs to the proprietor, his / her authorized agents, organizations and individuals, as well as to other property rights to lease the property.

State and municipal property objects for the lease of legal entities and physical persons of foreign states shall be granted only with the consent of the proprietor.

Features of lease agreements

Any legal or natural person may be a lessee. The lessees have the right to create associations, unions, other associations based on their voluntary contributions, fund their activities and, in accordance with statutes, freely leave them.

The main document regulating the relations of the tenant with the tenant is a lease agreement. The leasing agreement includes the following: the composition and value of the leased property, the amount of the leasing fee, the terms of leasing, attitude to the possibility of second-hand leasing of property (re-leasing the leased property), the duty division of parties in the field of full reconstruction and repairing the leased property, the duty of leaser to give the property to the leaseholder in terms of the agreement, the duty of leaseholder to use the property in terms of the agreement, the duty of leaseholder to pay the rent and to return the property to the leaser in a way as conditioned in agreement after the termination of it.

When state-owned property is owned by enterprises and organizations funded by the state budget, except for the cases specified by law, rental fees are transferred to the state budget at 100 per cent and 50 per cent of commercial enterprises and organizations remain at the disposal of those enterprises (Katina and Keating, 2015).

The control to the receipts of lease of state-property is carried out by relevant executive authority. When dealing with leasing and leasing businesses, the contract may include a progressive reduction of the amount of dotation, loss-recovery, profitability commitments, and lease payments. The lessee may give concessions on the amount of lease payments to lessee-owned and lessor-owned state-owned enterprises.

Lease of property does not result in the transfer of ownership of the property. Property and income received by the lessor as a result of use of the leased

property, as well as the property acquired by the leased property, are his property. Unless otherwise provided for in the lease agreement, the lessor may, in the leased premises, be constructed at the expense of the lessor, with the consent of the lessor. When the contract expires or the contract is terminated, the lessor shall pay the lessee the market value of those premises and facilities.

“Joint venture” analysis

The term "Joint venture" was first used in the West in the nineteenth century and was widely spread in the twentieth century. Initially, enterprises were forced to carry out large-scale projects in extractive industries and in construction, and then the process of intensive production of such enterprises took place in the manufacturing industries.

In the Western economic literature, the enterprise is characterized as a form of the right of the organization of international business and its following signs:

- The joint venture is created partly by the assets of two or more parties, or capitalization of each partner;
- The enterprise may engage in production, trade, finance, research and development;
- Responsibility for governance among the parties;
- capital investment is long-term;
- entrepreneurship covers only a portion of the participants' activities;
- The risk of profitability and entrepreneurship is raised in proportion to the share of each of them in the capital investment.

The Joint venture deals with the planned, created, controlled and managed rights of two or more country partners as an independent investor. Broadly speaking, the venture operates production and trading activities based on contractual and cooperative relationships in the production and transmission spheres of the two or more partners in the scientific, technical, investment, service and other fields. More precisely, it can be achieved by minimizing production costs, minimizing costs, facilitating access to new markets and facilitating access to cheap resources, minimizing vulnerabilities (resource and technology failure, lower management knowledge), and ultimately higher earnings is the most promising form of co-operation agreements between two or more Partner countries in order to achieve this goal.

The basic principles of the formation and development of entrepreneurship can be achieved through the cooperation of some partners.

The common purpose of joint venture is to ensure long-term earnings by a partner enterprise. This functional purpose can be achieved by different methods. For example, providing access to new markets, reducing production costs, raising

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competitiveness in the marketplace, reducing the impact of risk on their business activities through cooperation among partners, and so on. Motivation to create entrepreneurship is diverse and covers all aspects of the company's business strategy (Kasymli, 2014). The company's strategy dominancy of any motive can rarely, usually gets a lot of reasons.

Thus, at certain stages of economic development, certain contradictions are in the interests of partners. Joint selection of business partners is very important. Success or failure in business activities largely depends on the solution of the issue of selecting partners. The experiment of businessmen proves that it is not right to connect with people you have not met and become a partner with people you do not know well. Partner: if supplier, customer and buyer are not friend, you should be familiar with him at least. Collection, systematization and in-depth analysis of information about a potential foreign partner is the most responsible stage of entrepreneurship.

At the moment there are many sources of economic information collection and acquisition. There is a widespread network of information, marketing and consulting firms involved in collecting and studying information in the Western states. The best sources of information access are the official publication of statistical information, celebrated media, the Internet.

Comparative analysis of industrial regions of different countries

It is built on the territory specially allocated for industrial development. The first examples began in 1960 as the establishment of Free Economic Zones in production (industry) in various forms. These zones were built around maritime ports mainly in countries with very cheap labor force. At the same time, industrial (industrial) oriented regions were established in developed countries and even in socialist countries (in 1967, in Belgrade, Yugoslavia). The creation of production-oriented Free Economic Zones has contributed to the development of large-scale production and, thus, the transfer of relevant technology and knowledge. Along with such industrial areas, industrial zones ("industrial neighborhoods"), which, as a rule, have no special economic privileges (tax and customs privileges) have begun to form (Ministry of Economy...).

In industrial neighborhoods, several other incentive advantages are provided, in addition to infrastructure (electricity, gas, sewerage, buildings and structures) and management services. The number of these advantages and the duration of implementation depend on the general economic and industrial policy carried out in the country and vary from country to country. The stimulating benefits offered in some countries are as follows:

- long and short-term loans with low interest;
- The subsidy of rentals of ready and modern buildings (hangars) and devices;
- Water and electricity subsidies;
- Subsidies for communication services;
- Tax incentives;
- A window system for entry to the neighborhood;
- Joint use of production areas, equipment and services;
- Residential buildings for workers.

International experience in emerging and recently-developed industrial neighborhoods is given in the example of the following countries.

In the Republic of Turkey, there are 456 industrial neighborhoods where about 500,000 people are employed. They have been established by industry co-operatives since 1965 with the support of the Ministry of Science, Industry and Technology. The main objectives of building industry neighborhoods are as follows:

- provision of jobs in accordance with sanitary regulations and increasing labor productivity;
- transformation the small businesses into medium enterprises and achieve of technological development;
- organization of planned urbanization and thus prevention of environmental pollution;
- Extension of Vocational Education through the joint initiative of the Ministry of Education and the Ministry of Science, Industry and Technology (there are private vocational schools in about 100 industrial neighborhoods and educational centers in 140 industrial neighborhoods).

The largest of Industrial Estate is "Aykosan" Industrial Estate ("Aykosan Sanaye Sitesi") with 86 hectares of areas (64 hectares of buildings) and the smallest of Industrial Estate is "Bıksan" (Bakırköy) with 4.700 hectares (5.8 hectares of buildings). Anchorage area for rent in industrial neighborhoods starts at 60 m². During the construction of the industrial block, \$ 280 will be allocated for the construction of a building (anarchy) with the norms of 2013.

50% to 70% of the cost of setting up an industrial block by the Ministry of Science, Industry and Technology is provided at least for a period of 11 years. In the first year after the submission of the loan to repay the loan, no payments shall be made.

Industrial neighborhoods in the Great Britain are a highly developed mechanism. Thus, the Trafford Park, industrial park in Manchester, England, is considered to be the world's first planned industrial zone. Trafford Park, the largest industrial district in Europe, has 10 industrial neighborhoods and warehouses, geographically separate from each other (Albrecht, 2017). Generally, in many parts of the Great Britain, especially in smaller towns, there

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are a large number of private industrial neighborhoods. These neighborhoods include about 10-50 hectares of land and 50-100 m² of rental areas (Piyatrapoomi et al., 2004).

In the Republic of Kazakhstan, a number of documents were adopted in 2006-2010, which enabled the development of industrial zones (neighborhoods) in the country. At present Kazakhstan is working on creation of 15 industrial subdivisions. The Ministry of Economic Development of the Russian Federation has developed a project of methodological recommendations on creating industrial neighborhoods. According to the draft document, the industrial block is created on the initiative of the local executive power, municipality or the private sector in the subjects of the Russian Federation for the purpose of development of small and medium enterprises.

At present, the work on preparation and coordination of a single draft document on industrial block in the Republic of Belarus is underway. Industrial neighborhood is designed to support production or scientific research activities of small and medium-sized enterprises. The leading activity in the establishment of the neighborhood is divided into local executive bodies and local executive authorities must employ local associations and unions to work closely in the establishment of the neighborhood. The selected land is leased to the organization, its area must be at least 10 hectares, the distance from the main communications should be at least 20 km. The area should be provided with adequate infrastructure (heat and electricity, water supply, domestic and industrial wastes utilization, firefighting service, transport communications, communication services, etc.). Funding for the creation of an industrial block can be made at the expense of central executive power, local executive power and management company. Also, the private sector can be attracted to the private sector scheme. Malaysia has about 600 industrial zones (free zones, technoparks, science parks, industrial neighborhoods, etc.) and nearly 200 industrial neighborhoods. Most industrial zones have been established by the State Economic Development Corporation, Regional Development Agencies, seaports and local executive authorities. Additionally, in some provinces, industrial neighborhoods are built by private companies.

There are 18 small and medium-sized industrial sites in Sri Lanka and all of them are managed by the Industrial Development Council. The concept of "The Mahinda Chinatana" is aimed at improving the geographical structure of industry through the establishment of industrial neighborhoods, thereby addressing the inequality in the development of industry between the city and the region. It is planned to build 5 new industrial neighborhoods in

Sri Lanka in the following years. Some industrial sites are planned to be built with the financial support of foreign countries. For example, construction of Atchchaveli industrial zone in Jaffna province is carried out with the support of the Indian Government. (<http://senaye.gov.lk>).

In the Republic of Azerbaijan, the construction of large infrastructure projects in the regions has been carried out by the state since 2004. However, the decline in oil revenues compared with previous years and the relative decline in state budget revenues have created serious difficulties in the implementation of infrastructure projects in recent years. In order to achieve strategic goals, the creation of private sector interests in the implementation of infrastructure projects and, in this case, involving public funds can also be economically beneficial. Because of the state support in Azerbaijan, entrepreneurial class, which has considerable financial potential, has been formed.

During the construction of large infrastructure facilities, the economic mechanism of public-private partnership projects should be developed, reconstruction and development of international and development banks should be ensured.

The involvement of private equity in infrastructure projects is a serious responsibility for the government and its institutions, as well as developed banks. Their main task in this direction is to prepare and implement this mechanism for managing the infrastructure design risk and spending of funds to be invested.

Given the decline in aggregate demand and shortage of financial resources in the context of the global economic downturn, it is expedient to issue bonds to circulation at the expense of the active funds of certain development banks in order to accelerate the implementation of large-scale infrastructure projects and ensure the completion of projects financially.

Implementation of infrastructure projects

At the same time, it should be noted that during the implementation of infrastructure projects that ensure the sustainable development of the economy of the Republic of Azerbaijan in the modern times, some problems may arise depending on the current situation (Mir-Babayev et al., 2017). Based on the research, the problems that may arise during the implementation of infrastructure projects can be summarized as follows:

- Any deficiencies and deficiencies can be avoided due to improper maintenance during planning and optimization of existing infrastructure projects;

- To improve the effectiveness of infrastructure projects, we must strive to successfully fulfill contractual commitments on resource provision,



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otherwise, the integrity of the infrastructure can be violated due to the lack of raw material and material;

- The human resources needed to manage high-tech infrastructure projects can not cope;
- The high level of administrative barriers that may exist in the management of infrastructure projects, the likelihood of corruption and bribery, and other problems that may delay the development of infrastructures in Azerbaijan.

Looking back over the past, we see that one of the most important problems that arose during the construction of infrastructure projects was the failure to carry out serious, effective control over project finance and implementation of costs. When the control mechanism is weak, sometimes cost can be artificially increased, the projects can not be implemented at the required level and during the required period, resulting in lower quality of service, with the cost of the facility being reduced.

The modern economic development of the Republic of Azerbaijan allows the implementation of large-scale infrastructure projects that provide sustainable economic development through the state's financial costs. However, the study of advanced international experience, government-driven policy, the development of the private sector and the allocation of funds in this direction, suggests that in the future private sector can be involved in the construction of infrastructure projects. For this reason, the financial system needs to be re-established through efficient management of infrastructure projects, strengthening market mechanisms and expanding the fair competition market.

This approach can also improve the physical and cultural well-being of the population by influencing the creation and development of infrastructure.

Conclusion

By summarizing the carried out studies, it can be concluded that it is important and important for the elimination of existing problems and improving the development of infrastructures affecting the sustainable economic development of the Republic of Azerbaijan:

1. Using public-private partnerships in the implementation of large-scale infrastructure projects in Azerbaijan, taking advantage of the advanced experience of the global economy;
2. Implementation of innovative infrastructure projects on the basis of public-private partnerships, in order to increase the effectiveness of the work, to implement a management system in the form of regulatory and control;
3. It may be expedient to use the financial policy attributes of the financial market of Azerbaijan when building large infrastructure projects at the expense of private companies.

In our view, the application of the proposed recommendations to the economy can ensure sustainable economic development in our country, influencing the economical costs of our country living in a war-time, as well as influencing the creation and development of socio-economic infrastructures.

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Vasila Karimbekovna Abdullaeva
Doctor of sciences in medicine,
Head of Department of psychiatry
and medical psychology
Tashkent pediatric medical institute,
Uzbekistan



Temur Bahodirovich Irmukhamedov
Assistant of Department of psychiatry
and medical psychology
Tashkent pediatric medical institute,
Uzbekistan

SECTION 20. Medicine.

PREDICTORS OF FORMATION OF THE PATHOLOGICAL HOBBIES IN PATIENTS WITH PARANOID SCHIZOPHRENIA

Abstract: Premorbid features of patients in contrast to biological and psychosocial factors are more significant in the development of abnormal hobbies. Individual diversity of patients, activity determine the peculiarities of motivation, variety of pathological hobbies.

Key words: paranoid schizophrenia, pathological hobbies.

Language: English

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Introduction

The pathological hobbies are often the first signs of the debut of schizophrenia in the structure of syndrome of overvalued entities, "metaphysical intoxication", "rise of schizoid" [2, p. 205; 4, p. 657; 7, p. 15]. Occurring gradation of the abnormal hobbies are mostly descriptive in nature [1, p. 202; 9, p. 220]. Pathological hobbies require careful study of the clinical structure due to the weak development of pathological qualifications, the complexity of differentiation from other abnormal disorders [3, p. 53; 6, p. 435; 10, p. 570].

The relevance of the study is largely due to the significant and ambiguous influence of abnormal hobbies on the social functioning of patients [12, p. 840; 13, p. 376; 14, p. 85]. In connection with the above, it becomes obvious that there is a need for a more detailed study of this pathology in order to improve the diagnostic process, earlier detection of endogenous pathology [5, p. 245; 8, p. 280; 11, p. 6].

The aim of the study was to identify risk factors and conditions for the formation of pathological hobbies in patients with paranoid schizophrenia.

Material and methods: 46 patients with paranoid schizophrenia aged 20-45 years were examined by clinical and psychopathological method. All patients were examined using a specially designed scheme of the history of the disease, reflecting the specifics of the ongoing development. The assessment of premorbid personal characteristics

was carried out on the basis of anamnestic data obtained from the words of the patient and his relatives. In addition to the clinical methods of examination, the results of the experimental psychological study were taken into account: the elimination of the fourth excess, the allocation of essential features, a test for classification, an icon, a personal questionnaire MMPI. The use of the PANSS scale made it possible to assess the severity of psychopathological, mainly negative symptoms.

Results and discussion: During the study, we found that the age preferred for the onset of pathological hobbies in patients with paranoid schizophrenia belonged to the period up to 29 years (86.6%). Of these, at 11.0% of cases the development interests was in preschool, at 22.0% in primary school, 37.8% in adolescence and youth periods, and only 15.8% in adulthood. In the remaining 13.3% of observations pathological hobbies arose after 30 years. The obtained data correspond to the generally accepted opinion about the characteristic reference of hobby formation to the childhood and adolescence.

The prescription of occurrence of pathological hobbies was also analyzed. In half of the cases pathological hobbies had a prescription of occurrence from 5 years to 20 years which is testimony to their strong stability. In one third of the examined patients, the duration of abnormal hobbies ranged from 20 to 40 years, and in 9.8% of patients it was above 40 years. And only 7.3% of cases of abnormal interests

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lasted a less significant period, ranging from 1 to 4 years. The above confirms the significant stability of the studied pathological interests.

In addition to the characteristics of the age of onset and duration of the studied pathological hobbies, their interaction with the dynamics of schizophrenic spectrum disorders was assessed separately. The distribution of patients depending on the ratio of the terms of occurrence of pathological hobbies and disorders of the schizophrenic circle showed that in half of the observations pathological hobbies arose in close connection with disorders of the schizophrenic circle: shortly before the onset of the underlying disease (21.9%), simultaneously (6.1%) or shortly after the schizophrenic debut (24.4%). In 37.8% of cases, abnormal hobbies were formed long before the manifestation of schizophrenic spectrum disorders. And only in 10% of patients abnormal interests appeared on the background of a long course of the underlying disease. These results confirm a generally accepted relationship between the formation of abnormal interest with the debut of schizophrenic disorders circle.

The analysis of hereditary burden on mental diseases did not find the connection between the existing dysfunctional inheritance and the formation of abnormal interests. Burdened psychopathological inheritance to a greater extent affected the development of the underlying disease than abnormal hobbies.

To clarify the conditions for the formation of abnormal hobbies, indicators were taken into account both generally favorable and immediately preceding their beginning. These included: premorbid personal characteristics, concomitant somatic and neurological deviations, features of social and family status, psychotraumatic events. The retrospective analysis allowed to distinguish three groups of factors contributing to the emergence of pathological hobbies: biological, characterological and psychosocial.

Biological factors included the presence of residual organic insufficiency in half of the observations. 17.1% of patients with this pathology was mainly congenital in nature. In the anamnesis there was heavy during pregnancy prematurity post-term or time of birth, birth by section, with stimulation, forceps, umbilical cord entanglement, low Apgar score, asphyxia. In childhood, such patients are often observed in a neurologist due to developmental delay, hyperkinetic syndrome, headaches. In 21.9% of cases there was acquired organic brain damage caused by traumatic brain injuries, meningitis, vascular diseases, severe intoxication. In 9.8% of cases - a combination of congenital and acquired residual organic insufficiency. In the remaining 51.2% of cases organic insufficiency was absent.

In all the above cases it was possible to speak only about organic insufficiency. In anamnesis patients were registered cerebro-asthenic complaints, fatigue, meteosensitivity, difficulty concentration, mild memory disorders. Patients with current, gross organic diseases of the central nervous system were excluded from the study.

Organic insufficiency acted as an additional factor that contributed to the emergence of such personal traits as rigidity, thoroughness, pedantry, a tendency to long, intense affective reactions, indirectly facilitating super valuable fixation on the object of interest. In 62.2% of patients from early childhood or later in the characterological warehouse appeared stuck radical.

15,9% of patients had chronic somatic diseases in the compensation stage (congenital hemolytic anemia, congenital heart disease, peptic ulcer, bronchial asthma, rheumatism, chronic bronchitis). It was difficult to assess the impact of somatic pathology on the occurrence of abnormal hobbies.

Premorbid characteristics of patients are distributed in descending order as follows: schizoid (40,2%), epileptoid (20,7%), hyper-optimal (15,8%), hysterical (9,8%), mixed (6,1%), unstable (3,7%) and paranoid (3,7%). In all cases premorbid personality traits did not go beyond the accentuation of character. Patients of the most widespread group of a schizoid personal warehouse, mainly male, in the childhood gave preference to creative, gambling or simple game interests which quite often became a basis for the subsequent formation of abnormal hobbies. The beginning of abnormal hobbies related to 12-15 years, long before the debut of schizophrenic spectrum disorders. In addition to abnormal hobby was typical and normal hobbies. Schizoids, characterized by a tendency to autism and fantasizing, originality, multidirectional volitional activity, his hobbies associated with the field of a kind of "art", scientific interests, "spiritual" development and collecting. It was for this group of patients was characterized by a close connection of developing pathological interest with metaphysical intoxication. Schizoid patients preferred to plunge into their unproductive, unusual up to pretentiousness hobbies in isolation, secretly from others. Despite the seemingly weak emotional intensity, indifference to the case of interest, they devoted most of their free time without long breaks for many years. The duration of pathological hobbies in schizoid patients averaged from 10 to 20 years.

Patients-epileptoid also mostly men, as children were prone to creativity, collecting and self-improvement, which are then sometimes converted to the pathological hobby. Pathological interests of epileptoids along with the normal hobbies arose shortly before the outbreak of the underlying disease, 16-21 years old. Epileptoid patients was engaged in inventing, patiently mastered wood carving, batik

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and other types of activities that require persistence and painstaking. They continually, for decades, diligently realizing their emotionally charged, productive and traditional content hobbies. Patients with epileptoid premorbid did not tolerate the interventions of others in their private activities favorite thing, giving the reaction of dysphoria. The duration of the abnormal passions ranged from 10 to 50 years.

Hyperthymic personalities, mostly women, was dominated by the creative, scientific and sports children's hobbies, which eventually disappeared, spiraling into the pathological. Abnormal hobby the most often emerged after 30 years, simultaneously with debut disorders schizophrenic circle. Energetic, intolerant of inaction hypertime had many hobbies, including normal, easily changed, especially highlighting the art and sport. Unstable, emotionally intense anomalous interests of patients with hyperthymic warehouse was rather productive and unusual. The average duration of pathological Hobbies belonged to 10-20 years.

In persons of hysterical premorbid, more often female, popular in my childhood also enjoyed the creative, scientific and sports hobbies often then converted into the pathological. Abnormal interests were mainly formed in early childhood or matched with the heyday of the underlying disease. Abnormal hobby hysterics in the field of creativity and self-improvement allowed them to attract the attention of others. Were noted related to the normal interests. By the nature of the morbid hobby was marginal, unusual, extravagant, bright emotionally intense, unstable. The duration of pathological hobbies in patients with hysterical warehouse ranged from 20 to 40 years.

Patients mixed personal warehouse, often men, in childhood sought mainly to scientific, less-to sports hobbies, with age gradually reduced. Their pathological interests arose preferably in 22-30 years, mainly long before the debut of the underlying disease. In addition to the morbid interests often formed and normal hobbies. Patients with mixed characterological radicals favored sport hobbies, at least – science, collecting and self-improvement. Their unusual hobby were implemented away from people, was a little emotionally meaningful and sustainable, at the same time remained quite productive. It was characterized by an average duration of 20 to 30 years.

Patients with unstable personal characteristics, male, in childhood interested in collecting, at least – sports games, often becoming the basis for the pathological Hobbies. The preferred period for the deployment of painful interests was 7-11 years and slightly preceded the debut of the underlying disease. Patients unstable stock easily drawn to others in different classes, choosing a collective hobbies. Following hedonistic attitudes, gave preference to

gambling. Their abnormal hobbies were not productive, traditional, unstable, weakly emotionally saturated with a duration of 20 to 30 years.

Men of paranoia type in childhood actively engaged in research and self-development disciplines, later developing into abnormal interests. The characteristic period of the beginning of pathological hobbies ranged from 7 to 21 years, often in close contact with the time of manifestation of schizophrenic spectrum disorders. Patients of paranoia type readily mastered the field of science, possessed, overcoming all obstacles, tried to introduce their “scientific research”. Their morbid interests was characteristic of the conditional productivity, expressed the uniqueness of weak emotional intensity, maximum durability. The average duration of abnormal hobbies prevailed over the rest-more than 40-50 years.

Thus, the influence of premorbid primarily reflected on the nature, the content of pathological hobbies.

Their psychosocial well-being the most frequent factor of the influence of immediate family and social environment on the development of anomal interest (30.5%). A highly significant condition for the emergence of pathological hobbies was the impact of the immediate environment (23.1%) - its socio-professional level (8.5%) or existing own hobbies (14.6%). Less often there was a direct impact on the development of abnormal hobby social environment (7.4%). Contrary to expectations, the profession of parents, their social status rarely directly contributed to the formation of certain pathological hobbies (8.5% of cases). Much more often, the social and educational level of the family contributed to the patients highly qualified education, the choice of appropriate activities (35.4% of cases). In such families at least one of the parents had a higher education. In addition, families with high social status determined the content of pathological hobbies developing in patients. Most often in such families patients were supported by scientific and intellectual activities, self – improvement, less-creativity. The data obtained were largely due to the originality, talent, personal talent, enthusiasm of the parents themselves, who encouraged the child to receive a higher level of education, diversity of its development. In 35,4% of cases, relatives had their own super valuable interests, often attracting patients with them, cultivating in families a certain occupation (“the father instilled a love for collecting coins, showed how it can be exciting”, “the brother taught good music, taught to feel the harmony of sound”). These “vaccinated” patients hobbies later, in 14.6% of observations acquired the character of pathological obsession, singularity. Thus, the passion for numismatics grew into a collection of rare books, expensive collection dolls that filled the entire apartment to the dissatisfaction of relatives.



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Indulging in all patients the last money spent to replenish the little clear to others “valuable collections”. Interest in music gave rise to the need for days not to leave the room, composing their own abstract, cacophonous musical compositions. In other cases, the interests cultivated by relatives disappeared or developed into ordinary hobbies as the patient grew older. No less important for the formation of special interest was the influence of the social environment: friends, neighbors, co-workers (7.4% of cases).

Mental trauma was the second most common psychosocial factor directly or indirectly provoking the beginning of abnormal interests (9.7% of cases). Along with the above, special attention was paid to the subjective explanation of the causes of abnormal hobby from the words of the patient. The motivation described by patients both promoted the choice of a certain kind of activity, and supported constant attraction to abnormal hobby. The most frequent option of motivation in choosing a hobby (69.5% of cases) sounded “psychotherapeutic properties of hobby”, which became an outlet, increased mood, distracted from troubles, helped “in their own compositions to splash out emotions, reflect at least some part of their rich inner world”, “made it possible to communicate with others through creativity”. The second motive for selecting the corresponding anomalous interest (57.3% of cases) was fulfilling the thirst for knowledge, self-development with the “endless search for answers to the mysteries of life”, “desire to make himself a man”. In 13.4% of patients, pathological hobby was

chosen as the main business of life. 12.2% of cases based on selection of anomalous hobby became his recreational opportunities that build physical strength, improve appearance, or conversely, the ability of the selected hobbies to be helpful to others, “to carry to others the goodness and joy”. In 11.0% of cases of painful interests, attracted by the excitement, provoke the emergence of strong emotions, “grey allowed, measured, boring life to make a bright, beautiful”. Less often (6.1% of cases) patients attached importance to the external, demonstrative side of pathological fascination, its possibilities of public shock, attracting the attention of others. 6.1% of patients primarily attracted material aspects, abnormal hobby was perceived by them as additional earnings.

Conclusions: Thus, attention is drawn to the conditional possibility of the influence of organic inferiority and psychosocial factors on the development of abnormal interests. Biological factors contribute to the formation of affective rigidity, thoroughness, facilitating fixation on the area of interest. Psychosocial conditions of probation provoke the appearance of abnormal hobby, largely bearing the autochthonous character. In contrast to these two factors, the characterological premorbid features are seen to be more significant in the development of abnormal hobbies. Individual diversity of patients, activity determine the peculiarities of motivation, variety of pathological hobbies.

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Muyassarkhon Ganijonovna Umarxodjaeva

PhD in economics, associate professor
department of "Management",
Tashkent state university of
economics, Republic of Uzbekistan
Tashkent city



**SECTION 31. Economic research, finance,
innovation, risk management.**

INSTITUTIONAL FRAMEWORK OF DEVELOPING SMALL BUSINESSES MANAGEMENT

Abstract: This article is devoted to the theoretical and methodological research of formation of institutional framework of small business management, its current condition and peculiarities, as well as its improvement of theoretical-practical aspects. In addition to the study of institutional foundations of small businesses from the theoretical and practical point of view, the results of the research will facilitate improving of the efficient management of interaction of small businesses due to the minimization of transaction expenses as well as decision-making aimed at developing institutional environment on the basis of innovations' integration.

Key words: small business, small businesses management, institutional framework, innovation development.

Language: English

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INTRODUCTION

Sustainable development of the national economy and strengthening its potential in the conditions of international globalization, raising the welfare of the population are mainly connected with the formation of the layer of proprietors, in particular, the development of small business and private entrepreneurship.

Namely small businesses with their mobility and efforts attracting a small amount of resources are able to offer competitive products to consumers in a short period of time in the easiest way and with the quickest modernization of production. Today, one of the priorities of the global economy is the development of small businesses and private entrepreneurship in the newly appeared and nowadays developing countries, so formation of their institutional framework and improvement of their mechanisms on management problems have become topical issues for the world economy.

URGENCY

It is well known that in the transition period to the market economy, a number of laws and statutory acts have been adopted in the process of regulation of small businesses in the process of managing its cooperative and mutually beneficial activities [1].

The gradual transformation of the national economy into market relations during that period

contradicts the interrelations between small business entities and its institutions, thus the need for reorganizing its rational, institutional framework of its business activities from the point of view of modern management as well as the need for reconsideration its institutional business environment from the fundamental theoretical and methodological aspects have become one of the topical issues. In this regard, the importance of forming the institutional foundations for the development of small businesses in Uzbekistan over the past 26 years has been justified and in this regard a set of action plans have been developed.

Thus, the Action strategy for the development of the Republic of Uzbekistan for 2017-2021 pays a particular attention to this issue and the third prior direction devoted to the development and liberalization of the economy provides some preconditions aimed at further formation of the institutional framework of small businesses and private entrepreneurship and improvement of the principles of modern management such as ...“ensuring reliable protection of the rights and guarantees of private ownership, eliminating of all barriers and limits, providing full freedom for the development of small businesses and private entrepreneurship, applying in practice the principle “If people are rich, the state will also be rich and strong”, creating attractive business environment for



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the comprehensive development of small businesses and private entrepreneurship, strict prevention of illegal intervention of the public administration, supervisory and law enforcement authorities, implementation of modern standards and methods of the corporate governance, enhancing the role of the shareholders in the strategic management of enterprises, reduction of the government participation in the regulation of the socio-economic development of the country, decentralization and democratization of the public administration system” [2]. In this regard, studying organizational structure of institutional foundations of small business management, principles of management, current condition and its inherent peculiarities from the theoretical and methodological point of view as well as improvement of their scientific and methodological development are currently considered to be an important issue.

THEORETICAL APPROCHES

Nowadays determining the factors making an impact on the development of small business management on the basis of the theoretical study of its institutional framework, as well as creating the strategy for systematization and development has become one of the priorities of the economy. Formation of a structured institutional framework for small business mainly depends on the development of its business environment and infrastructure. In general, the essence of the word “business” has been widely studied from theoretical and methodological aspects, and the literary sources and dictionaries provide almost the same theoretical views.

Taking into consideration existing business environment of our country, A.Ulmasov and M.Sharifkhodjaev have given the following definition to the term “business”: «Business is legally allowed type of activity which enable community members to earn money and gain profit»[3]. This approach is a combination of the words “business” and “entrepreneurship”. Taking into consideration the scale of the business, status obtained in the market, amount of money circulation and a number of employees businesses can be classified into large, medium-size and small businesses.

It is well known that the issues related to the institutional framework of small businesses, as well as scientific, theoretical methodological foundations of developing the mechanisms for their management haven’t been thoroughly researched.

In a methodological approach, for example, from the point of view of one of the founders of traditional institutionalism Douglass Cecil North, institutions represent the framework within which people interact with each other. They include 3 structural foundations: informal constraints, formal (written) limitations in the form of rules and

regulations and obligations. The new institutionalist, Ronald Harry Coase [5] supposes that contraction and transaction costs still remain the issue of a significant concern.

Institutionalism has derived from the Latin word “instituto” [6] which assumes traditions, directions, institution and is characterized by the occurrence of industrial and financial monopolies, other organizations and enlarging of enterprises – the factors which are related to the transition to another stage of the society development.

If we analyze opinions of the supporters of the traditional institutionalism, Thorstein Bunde Veblen [7] determined an institution as behavioral stereotypes reflecting the state which has turned into an official custom making an impact on economic activities. John Rogers Commons [8] believes that institutions are socially developed and defined by normative rights which predetermine individual activities. Wesley Clair Mitchell assumes that the economic experience is the result of a robust setback in the mass consciousness by empirical summary of the mass phenomena of crystallization and economic activity.

Roy Hodgson gave the following definition: “Institutions are social organization leading to the creation of stable behavior samples through limiting customs, traditions or legislation” [9].

B. Berkinov assumed that “An institution is the system of official rules and non-official norms determining mutual relations among members of the society”. The role of the institutional framework in the management of small businesses has been developed in the evolutionary way, thus it has the period of its historical formation. As an example of this we can see the concept of the relations of the institutional evolutionary formation developed by Hodgson G. M [10].

In our country the history of the institutional approach can be observed in the “Codes of Temur” [11] – the book by Amir Temur devoted to the principles of the governance. This book illustrates the peculiarities of the governance at the Amir Temur state at that time, the rules for its internal and external policies, improvement of the legal framework, and the impact of the social-legal relations of that period on the entrepreneurial activity. It should be noted that examples of transformation of customs and traditions into a certain rule and its further regularization and the use for managing entrepreneurship activities were first demonstrated in such literary works as “Codes of Temur” and “The city of ideal people”.

In general we can say that the term “institute” has the same meaning as the tem “institution” which has derived from the Latin word “institutio” which denotes strict traditions or fixed customs, as well as laws, regulations or norms of the society accepted as rules [12].



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American scientist-economist William Rowan Hamilton was the first to introduce the scientific interpretation of the word “institutionalism” in 1918 and justified it as an economic category from the scientific point of view. According to his point of view, “institution” is a set of verbal signs determining a set of social customs and traditions [13]. He considers an institution as the method of strict thinking and making efforts turned into customs and traditions of social groups. It should be noted that the development of the business environment on the basis of the technocratic approach related to the peculiarities of internal and external factors was researched in scientific papers of A. Fayolle, G. Emerson, F. Taylor, G. Ford and others [14]. These researches reflect studying of evolutionary formation of the management theory and factors which can make impact on it with the account of engineering, technical and technological peculiarities and this approach was named as “classical” school.

ANALYTICAL PART

Studying of institutional environment of small businesses, first of all, assumes analysis of exogenous and endogeneous factors influencing them and as a result determines formation and development of small businesses under business relations. While researching business environment studying of institutional factors results in increase of its profitability. Herein external factors of the institutional environment of small businesses are not connected with it, however, it must comply with: innovation and technology policy in the field of small businesses of the state; fiscal policy and tax and taxation relations demographic factors and ideology of small businesses. Internal factors of the institutional environment are connected with social-economic potential of small businesses, manufacturing, innovation and engineer-technologic potential, labour force and personnel potential, business partners and value management, auditors and financial position.

All of above-mentioned statements solve the issues of ensuring small businesses with a robust, long-term legal environment, raising funds, attracting loans to meet the needs of small businesses’ projects for resources, ensuring the fair provision of income

gained by small businesses from implemented projects.

Institutional factors characterize the level of development of the market infrastructure - banking system, insurance system, distribution system (stock exchange for the capital movement, commodity exchanges for wholesale trade of raw materials and commodities), market mediation system providing legal, advisory, advertising and other services, as well as the existence of a single information environment that ensures the timely movement of capital and labor. These factors reduce the risk of small business and barriers to business access.

Thus, the institutional environment of small business entities is formed by the state regulation of formal and informal relations, which, in turn, are connected with available resources, opportunities of their achievement, rights and infrastructure, and is developed on the basis of certain agreements as a result of institutional changes in small businesses (Figure 2). As it is known, small business entities are exposed to certain institutional changes on the basis of government regulation and regulatory mechanisms, influencing their business environment on the basis of non-external influences, formal and non-formal rules, restrictions and institutional factors of coercion.

As far as we know, small businesses are subject to certain institutional changes related to the mechanisms of the governance and regulation that affects their business environment based on unrelated external factors such as formal and informal rules, restrictions and obligations.

The gap between the number of small business entities performing their activities within the institutional environment registered by the state and the number of operating entities is sharply increasing. The role of the existing business environment is considered to be significant, and if we analyze it in the regions, we can see changes in the industry-oriented regions.

The shortcomings of joint activities of small business entities with the largest manufacturing enterprises are the following: scarcity of management resources and own funds of the entrepreneur to attract the capital, limitation of his intellect by his personal experience, lack of accountability and some others.

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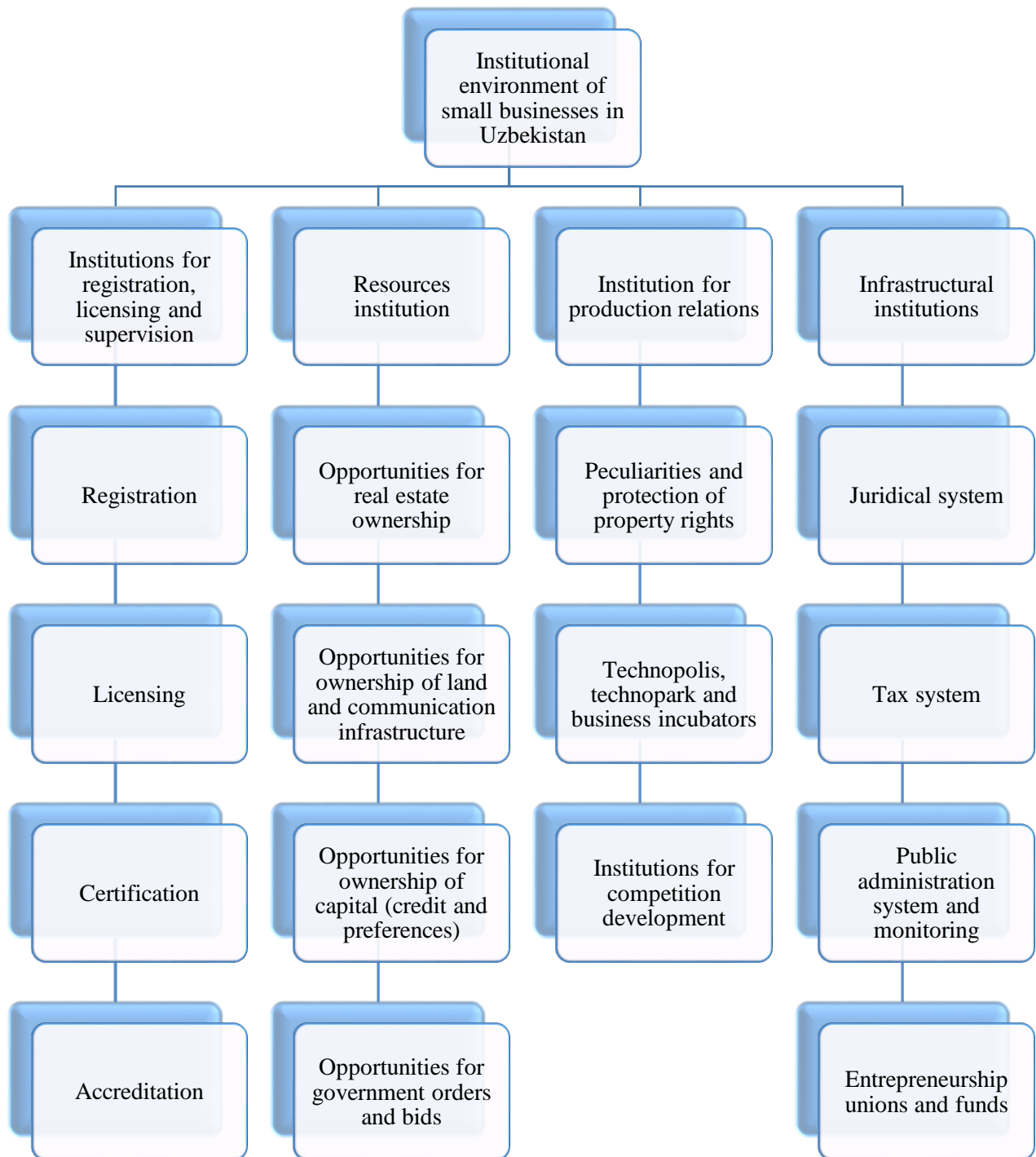


Figure 1. Institutional environment of small businesses in Uzbekistan.

As the analysis implemented by means of mathematical and statistical methods illustrates, during the period between 1995 and 2015 a number of adopted organizational documents and statutory acts aimed at the development of small businesses as well as a dynamics of change of their share in the GDP, in level functional interrelations the value of R^2 is considered to be highly positive, and the

dynamics of small businesses' growth accounts for $R^2= 0,996$ and the dynamics for the change of the share in GDP amounts to $R^2=0,9891$, but the rest of functional interrelations have no significant relations. The reason for it is as far as we know from the mathematical and statistic regularities, if R^2 is less than 0,5, functional interconnection illustrates, the analyzed indicators are divorced from reality (Figure 2).

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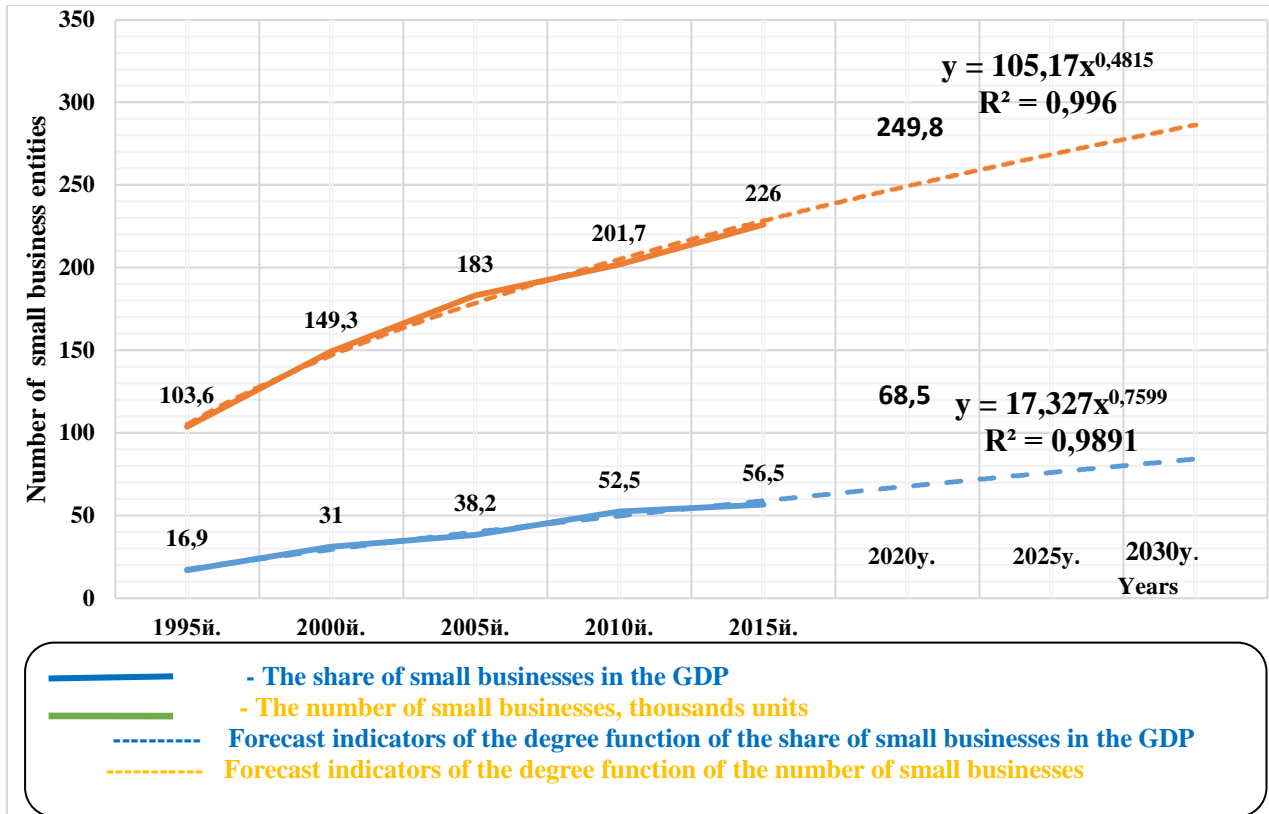


Figure 2. The share of small businesses in GDP and dynamics of its change in the period between 1995 and 2017 and forecasted indicators for 2030.

It should be noted that as the mathematical and statistical analysis of the dynamics of the change in the number of small businesses and GDP between 1995 and 2017 shows, in the process of the gradual development, the number of small businesses is gradually increasing, however, the gap between the share of small businesses in GDP and basic indicators taken for 5 years is growing too.

Along with this, the differences between the indicators that have occurred during the forecast period are typical for the corresponding trajectories that correspond to the dynamic change in the basic period.

However, both the number of small businesses and their share are increasing during basic and forecast periods. Moreover, we can see that the gap between the share of small businesses in GDP in the period of 1995 and 2017 is completely different from the dynamics for forecast period for 2030.

In general, as a result of the comparative analysis of the institutional factors affecting the business environment of small businesses, we can summarize the following conclusions:

First, in conditions of market relations, the government should regulate economic relations not only through taxation, investment, tariff policy, but also influencing on the market conjuncture through implementation of institutional policy of income of the population, aimed at supporting the sphere of strategic development and performance of economic

entities. At the same time, the improvement of market and institutional performance has become a topical issue. The regulatory relations based on the institutional approach facilitate to mitigate the disorderly market volatility, reduce the level of social expenditure on the economy restructuring, accelerating the development of the entrepreneurship activities in the manufacturing sector.

Second, it is necessary to find such a boundary of regulation of the economy by the institutional influence of the state, in which the state should promote the development of entrepreneurship not only making a negative impact, but also encourage its development. In this area, the government create obstacles for the entrepreneurial initiative through tax and bureaucratic restrictions.

Third, the integration of Uzbekistan into world business culture under the influence of social institutions has two implications: on the one hand, it is assumed that the Uzbek scholars are rapidly adopting the economic and philosophical ideas of the outsiders who were neglected during the former Soviet era. On the other hand, under existing market relations, Uzbek practitioners are actively using advanced methods of managing the households and economic activities (management, marketing, logistics, insurance, etc.). The use of these methods is a prerequisite for achieving a global efficient outcome.

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Fourth, it is impossible to create both large-scale manufacturing activities and production activities of small businesses without establishing any foundation and undertaking appropriate preliminary measures. When launching manufacturing activities, first of all, it is recommended to create an appropriate basis comprising of technological chains of existing production, scientific, innovative and professional aspects. These factors are considered to be the basis of the development of cooperation between the large industrial manufacturing and small businesses in Uzbekistan.

METHODOLOGICAL APPROACHES

Relations between small business entities and institutional environment can be observed in the following aspects:

□ In horizontal, that is, in changes of institutions connected with management on the basis of the efficient governance of economic processes which start from raw material supply, such as processing, marketing, logistics or distribution;

□ Vertical management - the practice of managing organizational and economic processes in the relations of small businesses connected with production of goods and services on the basis of organizational elements of administrative management structures.

There are peculiarities of horizontal and vertical management between small business entities, as well as its organizational mechanisms and the regulatory process, however, these issues haven't been researched completely yet.

As a result, a rapid development of the relations of the organizational management between small business entities has led to the unsatisfactory implementation of its internal innovation integration.

The institutional mechanism in the regulatory aspect comprises achieving the transformation of public procurement and bids through improving the law and statutory acts on electronic commerce and management as well as application of the mechanism of legal encouragement to the business portfolio.

Commercialization of technological knowledge is required for the development of technological opportunities in the industry. Such a facility provides the full range of intellectual property rights and enables technoparks and industrial parks, business incubators and venture companies to provide innovative technology under the universities and institutes.

The result of the innovation based integration and co-operation through business clusters in large and small businesses in developed economies is as it follows:

- Small business entities develop fruitful cooperation relations with large manufacturing

producers and business innovations turn into powerful alliances through integrated clusters;

- Small business entities create clusters of competitive business units due to economizing of transactions and transformation costs and as a result small businesses can achieve production benefits as a result of acquiring top specialization in their manufacturing units;

- Establishing business clusters of small businesses with large manufacturing producers enable to produce various goods on the high technical and technological level and to maintain efficient competition with large enterprises.

As a result, the experience of economically developed countries shows that the increasing role of entrepreneurship in the economy is not accidental, but rather a legal process, and, moreover, is considered to be a historical need.

In case of applying advanced manufacturing technologies used all over the world, it is possible to switch to the stage of the innovation development. The transition to the innovative stage of development can be achieved on the basis of a particular technological monopoly which we have in our country. There are many inventions in our country which have been created but currently are not applied in practice. This justifies a huge innovation potential in our country, however, there are certain problems of implementing innovations in practice. Almost all large producing enterprises as well as ministries and agencies have research centres which perform their activities in collaboration with the Centre for science and technologies development and have already obtained certain results.

The objectives of state-supported innovation entrepreneurship activities are the following:

- conducting of fundamental, research, experimental-design, technological and other scientific activities;

- development of research and experimental bases, updating of basic production assets, ensuring and promoting normal functioning of the existing stand, metrological and production bases center;

- procurement of scientific and technical literature, including literary sources published abroad, as well as the use of electronic information communications and information provision on the basis of international relations;

- training and professional development of highly-qualified personnel;

- participation in the events for international scientific-technical development.

As the experience of America major corporations, such as Dupont, Exxon, Ford, General Electric, Hercules, Zinger, and Ginion Carbide illustrates, that being launched at small enterprises the innovation process has been expanded at large enterprises.



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It should be noted that over 100 large corporations of the USA expanded their activities establishing small companies as a new instrument of the business development through venture capital. Their goal is to find new opportunities, develop useful relations, allocate the objects available for the implementation as well as introduce changes in the corporate culture.

CONCLUSION

The issue of studying organizational structure of institutional foundations of small business management, principles of management, current condition and its inherent peculiarities from the theoretical and methodological point of view as well as improvement of their scientific and methodological development is considered to be a topical issue. Thus the author, having researched theoretical and methodological foundations of this aspect, has determined efficient management strategy and prospects of the development of small businesses.

Small business entities require division of the institutions of external business environment into clusters integrated into innovation business. The institutional environment that ensures innovative

development is a combination of up-to-date technology and technology-based infrastructure that provides a high added value, enabling to develop by business environment clusters. It is necessary to raise the role of institutions and public organizations to support activities in the field of small and medium business in institutional and structural reforms based on market principles at the regional and local levels. In this case a particular attention must be paid to the following aspects:

✓ To focus on the activities of small businesses that manufacture production on the basis of technics and technologies which ensure a high degree of the value added of institutional and structural reforms;

✓ Implementation of institutions and structures of attracting subjects actively participating in creating high-tech chains of small businesses on the basis of the national innovation foundations;

✓ The system of personnel training in small businesses should be directed to the innovation centres at the local and regional levels, techno parks, high-technology developments, and this will lead to the development of institutions' collaboration with large manufacturing producers.

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Contents

	p.
1. Markelov GE MATHEMATICAL MODEL OF A TECHNICAL SYSTEM.	1-4
2. Egamberdiev A UZBEKISTAN STEPS INTO INNOVATIVE CHANGE.	5-8
3. Soloviy VV POSTMODERNISM AND UKRAINIAN POETRY, 1990 – 2010.	9-12
4. Mardonov BB SOME THEORITICAL PROBLEMS OF SERVICE SECTOR.	13-15
5. Saiidyrakhimova DS, Zhakypova DM GENERAL THEORETICAL ASPECTS IN SYNCHRONICAL TYPOLOGICAL LEARNING OF ENGLISH ADVERBS.	16-19
6. Kurbanbayev KA, Omorkulov AO INTERRELATION OF ART AND PHILOSOPHY: PHILOSOPHICAL ANALYSIS.	20-23
7. Kurbanbayev KA, Nurbaeva AK THE ESSENCE AND SPECIFICITY OF ART.	24-27
8. Khaydarov GM FROM THE HISTORICAL OF ECONOMY RELATIONSHIPS WITH THE COUNTRIES ENROLLED IN EUROPEAN UNION OF THE REPUBLIC OF UZBEKISTAN.	28-30
9. Garayeva K ATYPICAL MILITARY METAFICTION ABOUT WAR.	31-34
10. Mammadov HA CLASSIFICATION OF INFRASTRUCTURES.	35-39
11. Insopov JA THE DEMOGRAPHIC STUDY POPULATION OF SOVIET GERMAN, CRIMEAN TATAR AND TURK- MESHETINC FORMER USSR.	40-42
12. Kadyrov K THE HISTORY OF PUBLIC VOLUNTEER BODYGUARDS (PVB) OR VOLUNTEER POLICEMEN IN UZBEKISTAN.	43-45
13. Usov MA, Sudarkina SP PROBLEMS OF COMPLEX ESTIMATION OF INVESTMENT ATTRACTIVENESS OF INNOVATIVE PROJECTS.	46-52
14. Yurchenko OI, Titova NP, Belikov KN, Chernozhuk TV, Kravchenko OA, Tatarina TS ATOMIC-ABSORPTION AND ATOMIC-EMISSION WITH INDUCTIVE CONNECTED PLASMA DETERMINATION OF IRON AND MANGANESE IN CURATIVE CLAYS.	53-59
15. Kuryazova D THE ROLE OF SCIENTIFIC SOCIETIES IN THE COLLECTION AND STUDY OF THE TURKESTAN CULTURAL HERITAGE IN 1867-1916.	60-63



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16. **Kozhamkulova Z, Maikotov M, Kirkizbayeva B, Chingenzhinova Z, Sapieva G, Kerimbaeva V**
EXTENSION METHOD FOR LOCATION PROBLEMS WITH DISCRETE OBJECTS. 64-69
17. **Mirzanazarova EY**
TO THE PROBLEM OF LEARNING AND INVESTIGATING HISTORICAL MILITARY
DRESSES OF UZBEKISTAN. 70-73
18. **Mammadov HA**
THE IMPROVEMENT OF INFRASTRUCTURES USING THE LEADING WORLD
EXPERIENCE. 74-80
19. **Abdullaeva VK, Irmukhamedov TB**
PREDICTORS OF FORMATION OF THE PATHOLOGICAL HOBBIES IN PATIENTS
WITH PARANOID SCHIZOPHRENIA. 81-85
20. **Umarxodjaeva MG**
INSTITUTIONAL FRAMEWORK OF DEVELOPING SMALL BUSINESSES
MANAGEMENT. 86-92



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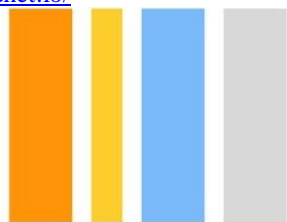
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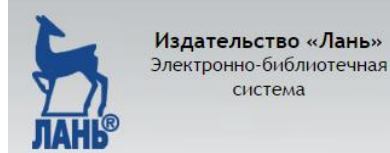
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