# Table of Contents

## Natural Science

### Earth Science

Drinking Water as One of the Crucial Factors of Human Health. ........................................ 3  
Viktoria Pribylova, Khou Chunsian

## Social Science

### Education

Effectiveness of Information and Communication Technologies in the Teaching Process  
(by an Example of Geography Lesson). ................................................................. 11  
Armen Ajamoghlyan

Possibilities of Usage of Traditions of the National Pedagogics at Biology Lessons. ............... 14  
Ogulsapar Redzepalyeva

### Law

Forfeiture in the History of Criminal Law of Kazakhstan. .................................................. 19  
Bibigul Kulmukhanbetova

Disputes about Delay Serving the Sentence by Drug Addicts. ............................................. 29  
Igor Melnikov

### Political Science

The Americans and the USA as Viewed by Russian Students: Stereotypes and Propaganda. ........ 35  
Vera Lubchak

### Psychology

The Influence of Computer Games on the Eyesight of Schoolchildren Aged 9 to 10 Years. .......... 41  
Ivan Tarasov, Victor K. Wittenbeck

## Humanities

### History and Archaeology

“Victims of Repressions” of Five Volumes. ................................................................. 47  
Khurshid Qurbanov

The American Dream. ................................................................................................. 51  
Eseniia Novokhatskaia

Partnership of the Republics of Central Asia and the United Nations for the Environmental Issues. ........ 56  
Khamro Rakhmonov

### Languages and Literature

Supra-Phrasal Unity: Revisited the History of the Concept. .............................................. 63  
Nigyar Babaeva
Attitude of Kazakh Teenagers to Kazakh Language. ........................................ 69
Anel Orazalina

Factors Determined the Attitude of “Molla Nasraddin” Magazine to the Classical Heritage ........ 73
Fatma Huseynova

Arts

Architecture of the Republic of Uzbekistan during the Year of Independence. ..................... 79
Dilshoda Sultanova, Sitora Dusanova, Zafar Dusanov

Harmonization of the Artistic Means in the Architectural Buildings Devoted to Astronautics in the Modern Architecture of Uzbekistan. .............................................................. 86
Dilshoda Sultanova, Mekhrozh Sabirov

Artistic Means of Agitation and Propaganda in Urban and Architectural Space of Modern Uzbekistan. 88
Dilshoda Sultanova

Art of embroidering in gold and silver of Adygea. ................................................. 91
Alevtina Khut

Applied Science

Engineering

Irrigation Water Management at the Local Level. ....................................................... 97
N. Degembaeva, A. Mamyrbaev, E. Baybagyshov

Research of Diode Resistive Chains in Power Supply Systems. .................................. 102
Rakhmatillo Karimov, Istat Karimov

Research of the Modes of Electric Chains by Reducing the Equations of State to a Standard Type in Power Supply Systems. ................................................................. 106
Rakhmatillo Karimov, Istat Karimov

Medicine

Factors Contributing to the Development of Bronchial Asthma. ............................... 113
Dilrabo Alikulova, Guloiom Avezova, Ilmiir Urazalieva, A.Kh. Juraev

The availability of Prenatal Ultrasound Diagnostics of Ventricular Septal Defect of the Fetal Heart. .. 116
Sanjar Khandamov, Vohid Sodirhonov, Gulnora Yusupalieva
NATURAL SCIENCE

Earth Science
Drinking Water as One of the Crucial Factors of Human Health

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Abstract. The problem of the quality of ground water and the influence of drinking water on the human organism as the crucial factor of human health was considered. An analysis of the macro- and microcomponent composition of drinking ground water of water intakes of the city of Zmiiv in the Kharkiv region was conducted. The systematization of data with respect to pollution components which were found in drinking water of water intakes being studied was carried out. During the study a microelement analysis of the composition of human hair which permits determining in greater detail the composition of chemical elements in the human organism was carried out. With the help of a cluster analysis the comparison of the microelement composition of human hair and ground water of water intakes of the research territory which is used for drinking purposes was carried out.

Keywords: quality of groundwater, drinking water, polluting components, trace element composition of hair, health, cluster analysis, groundwater, water abstraction, chemical elements.

INTRODUCTION

The influence of the quality of water on human organism was determined already in remote past. Already before the discovery of the existence of pathogenic microorganisms, epidemics of contagious intestinal diseases were associated with the water factor. After the works by Pasteur, Koch and other scientists it became known about the epidemiological importance of water in the spreading of such diseases as cholera, typhus, dysentery, parafits and other infectious diseases.

At present it is a generally accepted fact that water is one of the central factors of the formation of the health of the population. It means that an increase of the content of chemical components as compared to the background value and their compounds contributes to an increase of the frequency of diseases which are already spread among the population which resides on the research territory.

Studies connected with the assessment of the influence of drinking water on the state of the health of the population for the last 40 or 50 years have been carried out in many countries of the world and are very topical. Water is a universal solvent and the quality of life of a living being depends on its quality and composition. According to the statistics of the WHO, 500 million people on the planet suffer from diseases which are caused by poor-quality water and its acute shortage. Water is one of the central factors of the formation of the health of the population. According to the method of the comprehensive assessment of the influence of the environment on health, drinking water is considered, on the one hand, as a component of the environment which to the fullest extent characterizes the geochemical
peculiarities of the location and on the other hand, as a component of the environment which directly influences the human organism.

Great attention is also paid by scientists to the chemical composition of water as a possible reason for diseases of non-contagious nature. It’s common knowledge that drinking mineral water whose influence on the human organism is proved by practice is “medicine” with a wide spectrum of effect (usually in the reference for the prescription of mineral water you can find a list of diseases which are cured by it). In other words, mineral water which is drunk for a short period of time usually has a positive influence on all the functions of the organism. It’s worth assuming that similar influence is produced on the organism by water which is used for drinking purposes during the whole life.

In a number of cases the presence in the water of certain microelements attracted attention as a possible reason for mass diseases of non-contagious nature. An increased or decreased quantity of a microelement which the human organism receives is capable of disturbing the normal course of physiological processes and causes pathological conditions — microelementosis. The stability of the chemical composition of the organism is one of the most important and obligatory conditions of its normal functioning. It is well known that deviations in the receipt by the organism of macro- and microelements, the disturbance of their ratio in the diet directly influence the activity of the organism, can decrease or increase its resistive capacity and also the ability of its adaptation to the environment. Adverse conditions of the surroundings first of all pose a hazard to children who are characterized by increased sensitivity to insufficient or excessive receipt of chemical elements. Children’s organism is a certain marker of increased sensitivity of the organism to the state of the environment.

As a result of the anthropogenic activities of people practically all the fresh water of surface and ground sources turned out to be polluted with heavy metals and xenobiotics which are alien to the human organism (detergents, herbicides, pesticides, nitrates, nitrites, petroleum refinery products, etc.). In the process of transformation such things quite often decay into more toxic products than starting compounds and cause a depressive influence on the human immune system, resulting in different kinds of disorders in the organism.

The morbidity caused by water factors is formed at the expense of the rates of infectious parasitic diseases (intestinal, virus infections, bacterial, helminthoses, etc.) and also diseases of non-infectious nature which are connected with the shortage, excess or imbalance of microelements in water and represent a great number of diseases, syndromes of human pathological conditions — microelementosis. And the character and the level of a possible influence of microelements on the health of the population are not unequivocal.

The main part

According to the modern views, the elemental composition of hair shows the influence on people of both increased concentration of a number of chemical elements and an increase of physiological need for them best of all among other bioindicator environments. At the end of the 80s, a relatively new branch of the science of health appeared in medicine — microelementosis. It allows proceeding to the solution of questions connected with health with an approach which is unusual for us — connected with normal content of chemical elements in the organism through the analysis of bioobjects — blood, urine, hair, nails, bones, etc. In particular, the analysis of hair, nails correspond to the chemical composition of the organism on the whole that’s why an analysis of the mineral residue of hair after it was incinerated allows finding a shortage or excess of a number of chemical elements in the human organism.

The study of hair is of interest for determining the metabolism of microelements in the organism and toxic influence of certain heavy metals. The available data show that the content of microelements in hair reflects the microelement status of the organism on the whole and the hair samples are an integral indicator of the mineral metabolism. Due to many reasons hair is favourable material for such a study and has a number of advantages: it is easy to collect samples; stable storage at room temperature for an unlimited period; the concentration of microelements is much higher than in blood,
urine, saliva, which gives more opportunities for the determination; the biomatrix is more simple than blood and urine; a sample can be received without injuring the patient; hair combines the properties of an organ with accumulative effect, which makes it possible to conduct a retrospective analysis and to make a forecast.

During a real study it was planned to determine dependence between the content of chemical elements in the human organism and objects of the environment, to be more exact the ground water.

Children from the city of Zmiiv of the Kharkiv region took part in the experiment connected with the study of the ashes of hair at the premises of the laboratory of V. N. Karazin Kharkiv National University:
— children aged from 1 to 3 years old — 18 persons;
— children aged from 4 to 5 years old — 12 persons;
— children aged from 6 to 9 years old — 21 persons.

Based on the residue of the mineral part of hair (ash content) the following indicators were received:
Out of 51 persons only 15 persons had ash content which was higher than the conventional norm (1 %). At this stage of the study 23 chemical elements were determined, but the interpretation is given not for all 23 elements, but only for some of them due to the lack of information with respect to the norms of elements in the organism.

Structural elements (Ca, Mg, Na, K, P). In the study of the ash residue of hair the content of calcium amounts to from 3.0 % to 18 % and the conventional norm is considered to be from 10 % to 20 %; thus there is a shortage of calcium in 21 persons out of 51. The content of magnesium amounts to from 0.2 % to 4 % (the norm is 1–2 %). The normal content of magnesium is found in 13 persons out of 51, 12 persons out of 51 have excessive content, the content of magnesium in 9 persons is close to the norm (0.8 %), the other 17 persons have a shortage of magnesium (0.1–0.5 %). The content of phosphorus amounts to from 0.3 % to 5 %. In 14 cases out of 51 there is a shortage of phosphorus (less than 1 %).

Essential elements (Fe, Si, Zn, Cu, Mn, Al, Co, C, Ni). The analysis of the results suggests that in 18 cases out of 51 there is a shortage of iron (from 0.5 % to 0.8 % with the norm of about 1 %). The content of silicon in 23 samples out of 51 is normal, in the other 28 samples there is a shortage. The content of zinc is normal only in 7 samples out of 51 and in the other samples there is a definite shortage. Mn, Al and Ni were not considered due to the lack of conventional norms.

Toxic elements (Sn, Be, Cd, Bi, Pb, As, Hg). Be, Bi and Hg were not found in the hair ashes. Lead was found in all ash residues of hair from 0.007 to 0.1 %, which is much higher than the norm. Cadmium was found in the hair ashes of 27 persons within the limits from traces to 0.5 %. Cadmium was not found in 24 cases out of 51.

In the city of Zmiiv of the Kharkiv region there are centralized water intakes of ground water for household drinking purposes which use for drinking purposes the water from the Buchach-Kaniv and marlaceous-chalk deposits. The macrocomponent composition of water of most of the water intakes meet the requirements which are set for drinking water. The type of water is hydrocarbonate and hydrocarbonate-calcium. In the microcomponent composition of the water of centralized water intakes we found substances of the 1st, 2nd and 3rd hazard classes with the content which is higher than the norms of the maximum allowable concentration: the 1st hazard class — tellium, mercury; the 2nd hazard class — cadmium, lead, arsenic, aluminium, bromine, strontium; the 3rd hazard class — iron, mangan.

A cluster analysis was used in order to determine the relation between the chemical composition of ground water with the content of heavy metals from the wells of water intakes from which children use water, the surface water of the river Siverskyi Donets, and their content in the hair of these children. The suggested method is based on the fact that the surface water of the river Siverskyi Donets and the water from water-bearing beds which are used by wells in the city of Zmiiv have some differences of the chemical composition with respect to the content of heavy metals. Heavy metals, having been brought to the organism of people who consume this water are accumulated in it and cause changes in the chemical composition of hair, nails, etc., which, in its turn, suggests the state of
the health of the population of these cities. These changes tend to have a relation between their chemical composition with respect to the content of heavy metals and the chemical composition of ground water. It is obvious that the more a person consumes this water, the less the difference between the content of heavy metals in water and, for examples, in hair will be. Thus having numerically estimated the difference between the chemical composition with respect to the content of heavy metals of the surface water of the river Siverskyi Donets and the water from each of the water intake wells which people consume it is possible to determine the role of ground water in the formation of the content of heavy metals in their hair and the possible influence of water on health.

The cluster analysis was conducted with the use of an agglomerative hierarchical procedure with constructing a dendrogram — a one-dimensional graph which reflects mutual connections between objects. The essence of the agglomerative cluster procedure consists in calculating the function of Euclidean distances between all pairs of objects and uniting at each step the pair of objects which reaches the minimum of the function of the Euclidean distance, i.e. uniting the water from the wells which is consumed by people and their hair which is similar with respect to the content of heavy metals.

As a result of the cluster analysis the chemical analyses of water from water intake wells and the people’s hair with respect to the content of heavy metals were divided into clusters (groups). These clusters are divided into a few subclusters. One cluster unites water and people’s hair of the similar chemical composition with respect to the content of heavy metal. The bigger the similarity is or the smaller the Euclidean distance between the chemical compositions of water and hair of the people who consume this water is, the closer they are to each other. According to the results of this analysis, the similarity of the chemical composition of hair to the chemical composition of water which is consumed is determined for most of the participants of the experiment in the city of Zmiiv. That’s why we can make an assumption that the content of heavy metals in water of a certain well influences its content in hair of the people who consume this water.

CONCLUSIONS

1. The geochemical activities of ground water increase with every day under the influence of people’s anthropogenic activities which determine the ecological condition of the environment. The significant importance is acquired by the problem of the quality of water which is consumed by people for household and drinking purposes. That’s why without profound knowledge of the element composition of ground water, the process of its formation and the change under the influence of natural and artificial factors it is not possible today to seriously approach the solution of the question of the improvement of the quality of drinking ground water.

2. As a result of the determination of the composition and the concentration of microcomponents of ground water of water intakes of the city of Zmiiv of the Kharkiv region we found substances of the 1st, 2nd and 3rd hazard classes with respect to the content which is higher than the norms of the maximum allowable concentration: the 1st hazard class — tellium, mercury; the 2nd hazard class — cadmium, lead, arsenic, aluminium, bromine, strontium; the 3rd hazard class — iron, mangan.

3. With the help of a microelement analysis of the composition of hair we determined the content of chemical elements in ash residues of the hair of the children who live on the research territory. The analysis of the received results showed increased concentrations of heavy metals, a shortage of some structural and essential elements (vital ones) and also an exceeding of the content of toxic elements (Cd, Pb, Sn, Bi, Be, Hg, As, Tl) in a lot of hair samples.

4. A cluster analysis was used for the analysis of the similarity between the microelement composition of drinking ground water of water intakes of the city of Zmiiv of the Kharkiv region and some indicators of the organism of the children who consume this water. According to the results of this analysis, the similarity of the
chemical composition of hair to the chemical composition of water which is consumed is determined for most of the participants of the experiment. That's why we can make an assumption that the content of heavy metals in water of a certain well influences its content in hair of the people who consume this water.

5. Studying and detecting microelementosis in people allows us to approach the solution of the question about health with an approach which is new for us — about the normal content of chemical elements in the human organism and also to trace an interconnection between the content of elements in the organism with the anthropogenic load on the environment.

References


SOCIAL SCIENCE

Education
Effectiveness of Information and Communication Technologies in the Teaching Process (by an Example of Geography Lesson)

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Abstract. The necessity for ICT implementation required for raising efficiency of geography education is substantiated in the article. Modeling of geographical phenomena and processes by the implementation of computer technology makes the educational material more interesting and affordable for students. Students gain practical geographical knowledge during the educational process. It is impossible to imagine modern education without information and communication technology implementation (ICT). It has become the main prerequisite for ensuring efficiency in geography teaching within the educational sector.

Keywords: information and communication technologies, slide show, computer presentations, interactive whiteboards, educational computer games, computer tests, electronic libraries.

1. Introduction

Nowadays it’s impossible to manage the educational system at schools without adoption and implementation of information technologies in it. Using technical equipment and basic studies is not enough for solving the problem. Methodological support is very important for the real and justified implementation of information technologies in the teaching process. As for the teacher, it should be used as means for teaching process activation, lesson preparation and lesson efficiency increase. For the targeted solution for these issues, new methodological instructions and programs should be created which will provide transition for the students from reproductive to creative access and develop constructive thinking, form information culture, its evaluation and processing.

To determine the general relation between the intellectual potential and educational system, it is necessary to have theoretically justified and experimentally tested methods acceptable in the educational process. At the same time, it is necessary to meet the educational system requirements, to
ensure it is real and reasonable satisfaction. Teaching efficiency improvement for geography depends on the deductive models and new systems generation for professional development, which will support the students in getting the best way of the use of technological systems during the educational process and assist in forming self-orientated methodological basis.

It is necessary to design professional training models for teachers, with the use of practical applications of technical systems in the process of physical and social geographies.

Technological systems are particularly used in practical trainings and in the operations of map designing and field researches. The result of these activities is supposed to distinguish the ways of improvement for the subject of Geography, scientific capabilities, establish the real role of technological systems in the teaching process.

2. Methodology

Currently, the bulk of secondary schools are equipped with computer classrooms, which are intended for ICT use in a wide range of opportunities for the application of information technologies in the teaching process. It should be carried out based on age and individual characteristics of students, and their knowledge: ICT opportunities for efficiency also depends on the teacher’s capabilities, skills and abilities, and ICT proficiency level, as well as on children’s abilities.

Geography particularly plays a great role in the general education courses teaching that the planet Earth is humanity’s “common house” with its full knowledge, in the form of a structured opinion. Geography teaching effectiveness, from using traditional methods and modern approaches to professional teaching the right mix of technology, will provide students with the learning process by using ICT promoting more effective use of the skills and capacity development.

At a lesson about the characteristics of geographical age, the learning process can be organized by the use of information and communication technologies.

- Slide shows,

- Computer presentations,

- Interactive whiteboards,

- Educational computer games,

- Computer tests,

- Electronic libraries,

- Alive geography,

- School of GIS.

The students’ knowledge of geography-related computer programs, creative work, capacity development and experience in the acquisition of computer programs can be quickly changed according to the subject taught, displays, maps, tables, diagrams, slides, etc, related to the material. This is an opportunity to introduce the subject by simultaneously using the Internet to display universal sunlight photographs of charts, graphs and geographic phenomena. Alternating images of space can be used in the process of learning if necessary for the subject content. It should be mentioned that ICT is effectively applied in geography teaching process to ensure the desired result if the lab is equipped with the appropriate technical means in order for the teacher of the subject to have the necessary information and methodological skills to use these resources.

Geography textbooks taught in each subject require appropriate software tools which should be guided by the following provisions.

- For a new material, it is appropriate to use the demonstration program where students will present the topic clearer and make it more accessible.

- To master a new category of material, it is advisable to use a monitoring program, where participants demonstrate the skills necessary to represent the knowledge and material.

- Practical training can be used by the teacher during the lessons with pre-made contour maps, charts, photographs and short videos.

Information and communication technologies in the learning process, changing the traditional methods of teaching and learning, represent an opportunity to apply the “Reference century” with organization of new, efficient teaching methods. Obviously, the use of these technologies in the teaching process saves time, maintains students discipline, activates them to generate interest in the subject, contributes to the student-teacher-student interaction, as well as increases the efficiency of the learning process.
Modern ICT are used in the form of ideas and knowledge on sustainable use of the natural resources and environment. For pragmatic, practical teaching of students and for their practical work, organizing and providing access to the appropriate computer software package of Microsoft Office PowerPoint, it is desirable to use the same set of Excel, Word and other programs and printed materials.

Computer technology can be used to perform a test of knowledge in order to prepare teachers for the use of computer tests. Students’ test of knowledge can be performed both individually and in group by subjects.

It allows increasing interest and responsibility of the students for their own homework. Creative work on the preparation of presentations and computer slide shows can also be performed.

Capacity development, teaching classes and students of creative activity is directly associated with the use of computer technologies in the education system.

Practical ICT application is of particular importance when working with the maps and for field observations during the excursions.

3. Main Results

Hence, by using information and communication technology, the teacher:

• psychologically supports students to master the material in class and increase efficiency,
• increases students’ educational activity,
• generates interest in the subject,
• contributes to the development of spatial vision,
• evaluates practical significance of geography,
• facilitates easy understanding of the textbooks,
• increases the desire to study the subject,
• contributes to more complete mastering of theoretical basics,
• enables learners to acquire and develop computerized geographic information technologies,
• helps the students develop their own opinions and the ability to express them in a clear and simple way:

This solution implies methodological issues, new guidelines and targeted programs that provide students transition to reproductive thinking about creativity; it will form a constructive way of thinking, ability to evaluate information and culture.

References

Possibilities of Usage of Traditions of the National Pedagogics at Biology Lessons

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Abstract. The article is devoted to the traditional education in the process of education and upbringing of pupils. It reviews some issues of the development of conscious, responsible personal behavior of students in accordance with their life situations, as well as the solution of problems which arise in the process of practice and which are to become the most important aspects of the school.

Keywords: spiritual values, traditions, scientific world view, legend, belief, heritage.

The transition to the 12-year educational system in Turkmenistan requires the improving of the quality of education, its compliance with the international standards and enrichment of its content.

The national heritage of the Turkmen goes back to the immemorial time. During their centuries-old existence the Turkmen created their own material and spiritual values. An extensive research concerning the spiritual values of the Turkmen and their devolution to the younger generation from the scientific viewpoint was conducted in Turkmenistan. Previously the pupils were taught some advanced traditions of the folk pedagogics and folklore only at their literature lessons. However, the results of the scientific research proved the possibility of their usage at the biology lessons (studying the topics “Plants” and “Animals”); this makes possible for the in-depth learning of these topics and biological concepts of the curriculum. In this publication we would like to draw attention to the usage of fairy tales, legends, beliefs, and other at a biology lesson, as well as to the problem of the improving of skills and abilities, increasing of independence and scientific world view of pupils [1].

There is such a centuries-old belief concerning the thunderstorm among the Turkmen: “The thunder is the sound of stuff knocks of an old woman in heavens, who also throws the mushrooms on the earth after the rain”. As a matter of fact, this belief is very similar to the truth. After the spring rain there are a lot of mushrooms in the fields. From a scientific viewpoint it could be explained as follows: the germination of the fungal spores requires the humid environment. Thus, the rain is an irreplaceable component.

Studying the section “Plants”, the usage of legends concerning the origins of the names of plants has a huge value. It is useful to tell the pupil the legend about melons of the breed of “Vakharman” within the theme “The gourd family”. Thus, it is impossible to forget the Turkmenian selectors who
made their contribution to the world selection. We consider being expedient to begin the studying of the theme with the explaining that the melons of the breed “Vakharman” which are highly appreciated by their taste were created by Turkmenian selectors. Because of high juiciness of this melon, they crack easily. Thence their name is “Vakharman” (“vakh, arman” turkm.), that means “oh, it cracked”.

The Turkmen have also many unusual words concerning the animal world. Within the theme “The reptiles” it would be pertinent to tell about the belief concerning snakes. The people of Central Asia including the Turkmen have such a belief: “Having killed a snake, bury it at once. Otherwise the other snakes will come after the killed one”. The scientists proved this fact, and from the scientific viewpoint it could be explained as follows: the snakes have glands on their bellies which secrete an odorous liquid. And when a female snake creeps, this liquid settles on the surface of soil and leaves the smell. The male snake, searching a female one, finds it through this smell. In spite of the fact that this belief exists for a long time, the science proved it quite recently [3].

The biologist lesson will be more interesting if a teacher adds to a new theme a belief concerning the snakes. There is such situation which states: in summer days when the strong winds blow in deserts, there are flying snakes in the air. Such phenomenon was confirmed even by elderly and respectable people. This belief is interesting, because as a matter of fact it is very similar to the truth and it could be explained as follows: snakes have a molt period when they replace their skins. Sometimes it is possible to find out without any effort even the eye apertures on the old skin. A strong wind can raise highly the molted skins, creating the image of flying snakes. People, who know nothing about the molting process, trust easily that the flying snakes really exist [3]. Bearing in mind that there are no flying snakes in the nature, the teacher should explain the groundlessness of this belief.

No wonder that the animals are considered to be the weather forecasters. They are very sensitive to the changes of nature. Observing the behavior of animals, people could precisely assess the situation [4].

The Turkmen are engaged in sericulture. Some national values made from silk, such as keteni fabric, silk carpets, hand embroideries are well-known all over the world.

Using riddles, it is possible to raise the efficiency of a lesson. At biology lessons (studying the Lepidoptera within the topic “Animals”) it would be pertinent to set the following riddle:

Outside is a rattle, inside is a monster. (Cocoon or Pod).

After the children guess the riddle, it is pertinent to show them the drawings of the whole and sectional pod. And thus it is necessary to explain the content of this riddle. There is a chrysalis in a pod of a silkworm; shaking the pod you can hear a sound similar to the sound of a rattle. That is why the first phrase of the riddle sounds like it is. Then whilst showing the drawings with the sectional pod, the second phrase of the riddle could be explained. A monster is called so because this being doesn’t look like an animal, but it is alive. It is necessary to explain to the pupils that the pupal form passes in the pod. It is also very important to bring to the consciousness of the pupils that our ancestors tried in the ancient times to create the representation of the stages of development of a silkworm moth. And they managed it.

Due to the fact that the Turkmen were engaged in animal husbandry in the past, they accumulated a lot of valuable information about the plants and animals. Now it can be used for the explanation of some biological processes to the young generation. All this information found its worthy place in beliefs, fairy tales, legends, riddles and other genres of the oral national creativity.

It’s time to draw the spiritual values of the Turkmen from the pages of the history and to transfer them to the young generation. The usage of these values at biology lessons raises the interest of the pupils to the subject of biology. It was proved through the school practice. At the same time a lesson provides the interdisciplinary communication,
which gives pupils a chance to understand that all subjects which are taken place in their school are closely related to each other.

Studying these materials at biology lessons along with the usage of multimedia technologies, we can firmly tell that our ancestors had deep knowledge in the biology in the past.

Thus, the usage of rich national heritage makes possible to move the teaching and educational process forward, at secondary schools [2]. This possibility was proved through the results of scientific researches.

References

Law
Forfeiture in the History of Criminal Law of Kazakhstan

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Abstract. The article describes the history of application of penalty restricting the property rights of a person who committed a crime in criminal law of Kazakhstan until its sovereignty. The author makes a conclusion about the possibility of using historical experience in the improvement of the modern penal system of Kazakhstan.

Keywords: forfeiture, forfeiture of estate, common law of the Kazakhs, penalty.

The problem of using the legal heritage of world and national civilization is still relevant for improvement of the juridical system and legal practice. A certain attention in legal literature was paid to questions of history of development of the legislation on penalties and forfeiture of estate. It can be met not only in the works devoted to history of criminal law and system of punishment in general but also in works where various types of punishment were specially considered. Nevertheless, we believe that it is necessary to dwell on the main points in the development of legislation on property penalties in general. This will establish a definite pattern in their attitude as one of the links in the penal system of Kazakhstan. In addition, it is difficult to assess the role assigned to penalties and forfeiture of estate in the existing criminal legislation of Kazakhstan without an analysis of the law history and even more it is difficult to identify ways of improving them.

The property punishment is one of the oldest penalties. It appeared out of the primitive communal system. It means that system of replacing other methods of private revenge ransom system paid by the offender to the victim of others’ interests. Reimbursement or redemptions are the most characteristic for the period of development of state power. At that time the government itself was not strong enough to take business organization of the appointment and execution of punishment into its own hands. Reimbursements were met in the most ancient historical memorials of the slave system. They were common measure in the laws of Hammurabi. They were the only measure envisaged by the law of the Hittites. They also appeared in the law of ancient Judea and Rome [1]. They were also known in the ancient Kazakh right.

The analysis of the law of any society or ethnic group start with finding a source of law in this society. The main source of law in the Kazakh society of the XV-XVIII centuries (because of the specific natural-corporate, economic and other cultural aspects) was group collective right, the right of the original economic unit of society. It was based on customs and traditions of the community. So it was called customary. The study of common law is necessary
not only for comparative analysis against the modern law, but also because “it is natural and it is even necessary to consider usual behavior of people to establish what objectively is considered as fair in society” [2. P. 95]. Common law is also interesting for our research because pecuniary penalties dominated in its system of punishments.

The practicality of nomads played a role in formation of common law of the Kazakhs at a certain stage of economic and legal development, when the Kazakhs turned from primal Talion to more civilized economic relations. Undoubtedly, important and even defining nature of the law was an aspiration to adapt the existing norms of a common law for new requirements of society. In their customary law, like all people who are forced to deal with the existence of the blood feud, the Kazakhs sought to restrict its use. And the best way to do it was to replace the revenge system of ransom or compositions. The practice has developed measures such as limiting the right to revenge by a two-year period; the right to challenge the offender to a duel; a custom to pursue of a killer — when a killer escapes from the pursuit, he gets rid of revenge; ban on help to avenger from community, etc. [3. P. 21-27]. In spite of the fact that in some places the custom of blood feud has remained till the 19th century, the practice of reconciliation generally was in force on the basis of receiving composition — Kuhn. The right of Kazakhs to execute criminal justice didn’t belong only to the state because of extreme weakness of the central government. It was necessary to use a generic organization for the purposes of state coercion. The judicial functions were executed by the arbitral Tribunal of elders, the court of Biy, sultans and the court of the khan. All of them were the courts of first instance, so there was no possibility to appeal against judgements and adjudication. There were no special investigative and the police institutions. The administrative and judicial authorities were mainly concentrated in the hands of Biys.

In the study of the law of any society, great importance is given to legislative memorials, retaining existing society relationships. From this point of view, the study of common law of the Kazakhs is quite difficult, as many sources have reached us in a vitiated form. We often know only the name of the legislative monument. However, thanks to such scientists as A. Levshin, A. Bichurin, L.F. Ballyuzek, N. Grodekov, etc., we can say that the Kazakh criminal law of the XV-XVIII centuries was at a fairly high level of development and was based on rather developed normative acts. Here they are: a Set of rules “The laws of Kasym Khan”, united Adat and the norms of Iasi Genghis Khan which do not contradict Islam; “The laws of Esim Khan”, who has completed this unification; the most famous monument of Kazakh legislation “Ziti Zharhy” of Tauke Khan combining all previous rules. It certainly cannot be said that a definite code was created thanks to definite Khan. So, S.L. Fuchs wrote: “It can generally be regarded as the established fact that the Kazakh tradition erroneously thought Tauke was a daring social reformer. In his vigorous activities, the center of gravity is not in the creation of any new instruments, but in strengthening the existing ones” [4. P. 103]. In our opinion, this statement can be attributed to Kasym and Esim Khans. The fact is that in the Kazakh society there is a need for legislative regulation of society fundamentals, the legal expression of living conditions and conflicts of the society at that time, their social and legal norms, by which every individual of the society was included into the overall structure of the khanate.

The most important thing for our research is that “Ziti Zharhy” reflects the basic principles of common law of the Kazakh. This legislative monument was mainly focused on protection of property and regulation of disputes associated with it. A characteristic feature of “Ziti Zharhy” is that the Bies were provided with the right to limit blood feud replacing the death penalty by payment of Kuhn. Now Kuhn has received its clearer legislative expression. “Ziti Zharhy” legalized barymta (stealing cattle from nomadic Turkic peoples as a way to avenge the insult or compensate for damages). It should be noted that barymta testified about the “inability of state power to punish the offender. The government suggests the victim to take vengeance on enemy, murderer, thief or robber by own forces or by forces of the relatives [5. P. 92]. Thus, barymta was also a property of punishment but as it was semi-legal, we will not dwell on this item. We are interested in the legal forms of property penalties.

There was no distinction between the crime as a criminal offense and a civil infraction in the
Kazakh criminal law in the XV-XVII centuries. It was quite simple. If the sentence included an award of a penalty fee, it was executed under pressure of the “Biy authority”, the “authority of public opinion” [5. P. 92].

The right to expiate punishment by repayment wasn’t unconditional. There were both a death penalty and corporal punishments. There was no confinement in the form of imprisonment only because of its absence. The right to be redeemed from punishment depended on the consent of the victim. When Biy failed to persuade the offender to accept the ransom, the offender received a sentence consistent with “an eye for an eye” principles.

Property of penalty for the crime was a punishment in every sense of the word, i.e. a measure of state coercion, exercised in the interests of the state. They were no means of enrichment or compensation for the harm caused to the victim but means of criminal penalties. Reimbursements appeared not as an exchange equivalent but as a compensation of the damage caused. Neither victim itself nor its relatives had right to enrich themselves at the expense of the payment of ransom by a criminal. Even in case of a murder (the most dangerous crime), a ransom was not in favor of the victim’s family. The external expression of the national nature of the property is a penalty payment of a ransom, which is not in favor of the victim but for the benefit of society and the court.

In the common law of the Kazakhs, the principle of criminal responsibility included collective criminal liability of the relatives and family members. It was expressed primarily as a financial responsibility of the clan. The reason for criminal responsibility is collective generic private property. In particular, customary law regulates, relations of ownership. Crime is a violation of property rights, consequently, punishment is a restoration of property rights. On the other hand, collective criminal responsibility served to the purposes of crime prevention. Kindred could not infinitely share the responsibility with the criminal: “All measures to rehabilitate him are exhausted, they publicly dis-associated from him, and from Kuhn if someone kills him” [5. P. 81]. In such cases, corporal punishment was used. It is clear that a person in such circumstances will be more careful in choosing the means to solve his problems.

As for the priority of property over other punishments, this is due to the peculiarities of the Kazakh economy of that time. Livestock was a measure of all values for Kazakh herdsmen, the basis of existence: “… in the old times, the starting point of all Kazakh persuasives and concerns was cattle. They suited the life, being accustomed to requirements of cattle breeding” [6. P. 106-107]. So the payment of the Kuhn was actually a punishment. This does not mean that livestock was valued more that human life. Livestock was a measure equivalent and could compensate the offense — so great was its value. However, the property was a priority basis to the value of human life at that time. By losing cattle, a man could lose his life, at least from hunger or going into slavery which is also a loss of identity. So the purpose of punishment in the form of partial or complete deprivation of property was stronger punishment than punishment in the form of imprisonment nowadays.

Having found out the nature of property punishments for crimes in the Kazakh common law, we are going to proceed to its classification and consideration of its separate types.

Punishment for the murder, heavy mutilation and crimes equated to murder (rape, adultery and kidnapping of a woman) are primarily distinguished from property punishments in the Kazakh common law. Such punishment was called Kuhn (the cost). The concept of the “Kuhn” in the modern legal language can be translated as a compensation of material damage and caused damage. Classification, the amounts and the ways of the Kuhn payment have been developed extensively and in detail in the Kazakh legal monuments. Payment of the Kuhn was the ransom of a guilty person, his complete exemption from liability to the victim and it served as satisfaction of the latter, and at the same time punishment of the guilty [3. P. 80].

Data on the Kuhn amount can be founds in works of many authors, such as A. Levshin, S.G. Klyashtorny, T.I. Sultanov, S.Z. Zimanov, etc. But in our opinion, the most comprehensive analysis and systematization of the information on classification of types and amounts of property penalties in the common law of the Kazakhs is represented in
the works of S.L. Fuchs and N.S. Akhmetova. By analyzing the works of these authors, we have come to the following conclusions.

There is no strict schedule of prices contained in the sources of common law of other Nations in the Kazakh common law. Kazakh law fixed two prices of "blood" determined by social position of the victim. The price of a man's life was a common basis of the Kuhn system. It was based on the division on the basis of gender, social status, depending on the type and kind of injuries and wounds. Usually the Kuhn for a man was 100 horses, a slave or a single woman, 1 camel, military weapons, killer's horse, the carpet. The composition of the Kuhn was taken involuntarily. Each component of the Kuhn had its value. The slave or the woman were the main real compensation of the harm caused to the relative for the murder. A horse and arms of the murderer symbolized humility and a request for reconciliation. A black camel, a carpet or other cattle were used for organization of a funeral. Thus, the Kuhn for killing included compensation for material and moral damages.

Representatives of the nobility applied for sevenfold Kuhn but the Kuhn amount depended on the degree of eminence and could also make one and a half or two Kuhn. Tellingly, there was not a Khan's Kuhn, as the murder of the Khan seemed quite unthinkable crime. A precedent is known — the murder of Khan Abulhair. In the absence of the Khan Kuhn Tole Biy had to come up with a punishment for the regicides by combining talion and Kazakh common law. The Kuhn for a woman was a half of the Kuhn for a man: 500 heads of cattle, one camel, one horse and one carpet. The Kuhn for a woman of a notable origin was defined according to the eminence of her husband or father. By the way, they were the plaintiffs. The murder of a pregnant woman was equal to the murder of two people. The Kuhn for the life of the child was determined from the time of conception and sex. Under the Tauke law, a horse was paid for a baby about five months old for every month. From five and above it was a camel for every month (for a boy). For girls, respectively it was a half of the the Kuhn. Bodily injury to a pregnant woman causing miscarriage was also equal to murder. Moreover if the baby was born alive and died after full Kuhn was paid for him depending on the gender.

Such crimes as rape, abduction and adultery were regarded as similar crimes. Essentially tempered or kidnapped girl deprived by the parents of the opportunity to receive her dowry. The seduction of a married woman infringes upon right of inheritance. Kidnapping of a married woman caused property damage to the husband and his family as the bride wealth has been paid for her. A rapist could avoid the death penalty by paying the dowry and marrying the victim or paying full Kuhn. For an unmarried girl, father got the Kuhn, with the promise to marry from the groom — her husband. The rape of a married woman was equal to murder because the victim did not have the right to remain in the family. The husband had to divorce her, this way the family loses its member.

From the point of view of the modern right, morals, feminism, such situation demonstrated an unenviable share of the woman in the Kazakh society of the 15-19th centuries. We think that each era has its own reasons for its rights and morality. It is possible that the Kazakh women have adequately treated the privileges granted to them by society at that time. There is a lot of evidence about respect of the Kazakh women.

In a common law of the Kazakhs, the norms regulating punishment for infliction of bodily injury treat the norms regulating punishment for murder as private to general. The murder was considered as the destruction of the whole bodies and the deprivation of a particular body — as a partial murder [5. P. 168]. The practical value of a particular body from the nomadic economy point of view formed the basis for determination the amount of fees from injuries. The value of an organ, the human condition before the bodily injury, significance or insignificance of the injury and other circumstances were carefully considered by the court. At the same time, the amount of punishment exactly corresponded to the amount of damages. The payment of the strictly determined amount was collected for heavy mutilations. For example, loss of the ability to bear children was estimated at half of the Kuhn, for a broken tooth, “togyz” was collected that was a strictly defined penalty.

Thus, the sentence of the the Kuhn was prescribed only for serious crimes against the personality. The
Kuhn differs from all other types of criminal penalties which are called “aiyp” (guilty). “Togyz” is the most common and widespread among them (nine-fold penalty) and “atton” (a horse and expensive outerwear). Togyz has appeared in connection with theft, just as the Kuhn has appeared in connection with murder. And later in further development, togyz began to be applied more widely as an independent punishment and as addition to the Kuhn. Atton was used for minor crimes. [7. P. 196-201].

In the Kazakh common law, togyz as punishment is applied to all crimes, except murder, by differentiation (three togyz, nine togyz). As property punishment, togyz had various amounts too (camel togyz, horse togyz, etc.). A Biy had the right to appoint any valuable thing to togyz (a slave, clothes, a weapon, a carpet, etc.). Togyz is based on a triple penalty for stealing cattle that is the most ancient form of a fine. Threefold penalty “binding to a neck and to a tail” is purely cattle breeding invention [5. P. 104]. Stolen cattle held by the thief for some time must have been returned with the offspring. In this case, the damage was fully compensated with all the possibilities of stolen cattle.

In the appointment of togyz, the victim, received only stolen from the offspring and the rest of the fine was in favor of the Court (Authorities). As you can see, the victim was reimbursed with not only caused but also with possible damages (lost profits) because the smallest penalty was administered escalating the amount of actual damages. The fine became the penalty imposed to maintain public order, with the assistance of the state. Though weak, state power was represented by the power of communities.

The Kazakh Khanate hasn’t turned into the empire from the 15 to the 18th century. After the death of Tauke Khan who briefly extended its jurisdiction over the Kazakhs, Kazakhstan became politically fragmented country again. The Kazakhs finally were divided into three juz. Each had its own personal Khan. But there were no changes in common law norms. The common law didn’t express active state will. Khan’s power of nomads prevailed only in wartime and only with the participation and assistance of the same Biy.

Norms of the common law are legal irrespective of the activity of the government. Here we have a universal validity and priority of general validity. That is, the common law appears not only for centralization of public institutions, but is also quite able to exist as a free state and parallel state law.

From the first half of the eighteenth century, significant changes began to occur in the common law of the Kazakhs in connection with the accession to Russia. The Kazakh common law was transformed with the growing influence of Russia and the spread of Imperial legislation with a change of governance, social order and economic relations. This process took place in several stages up to the 60-s of the 19th century. Therefore the Kazakh territory has been gradually attached to the Russian Empire and has turned into its full submission. Tribal division continued to exist but the right gradually acquired a national nature. However, the empire had to take into account the local features and the right reflected the bizarre confusion and interweaving of the laws of the Empire and the common Kazakh law. “Russian authorities created new legal institutions of the sultans, rulers of the country, aul elders which have not surrender to the natural self-regulating mechanisms of the Kazakh society, but at the same time have not surrender to the controlling and regulating functions of the Russian law yet” [8. P. 200].

If at the beginning of accession process, the empire assumed “to soften all wild and cruel things”, then subsequently it had to trust Bies with their Ere-zhe (regulation) [9. P. 14]. There is nothing more wild and cruel than the Russian penalty such as pulling out nostrils, to burn the mark on the face and so on [10. P. 32].

Norms of the Russian right in force in Kazakhstan can be divided into two large groups: a) norms that were in force throughout the Empire and not reflecting the specific situation of Kazakhstan and b) the norms determined by the Tsar especially for Kazakhstan. The most important normative acts were the Charter of 1822, the Legislative act of 1854, the Provisional regulations of 1867 and 1868, the Regulations of 1886 and 1891, etc. [11. P. 130-140]. The imperial regime has consistently pursued a policy aimed at transformation of the common law system of the Kazakhs. Mainly it concerned the criminal-legal relations and norms regulating the activities of judicial-investigatory authorities. Judicial-investigatory authorities were formed within
the judicial-investigatory state of the Empire. The Biy court was in force at a country level. There was a district order under the chairmanship of aha — the sultan in the presence of two Russian assessors appointed by the regional chief and two notable elective Kazaks supervising him. The order of the district had its chancery, translators, police, the internal guards (Cossacks). Decisions in criminal cases were considered by the regional court, i.e. an opportunity to appeal has appeared.

Since the beginning of the XIX century, the government of the imperial regime tried to limit the common law. The Charter about the Siberian Kirghiz 1822 divided the crimes into three types: criminal, claim and complaints Departments. Biys lost the right to deal with offences crimes related to crimes: treason, homicidal offence, plunder and barymta, obvious disobedience of established authorities. All other crimes belonged to claim and were allowed for consideration by Biy court with the right of the appeal in the district. Property types of punishments lost their value with withdrawal of cases of crimes against life and with establishment of the punishments (imprisonment, exile, etc.) precisely specified in the Russian law. The experience has shown otherwise. So, the difference in views on penalties which took place in the Russian and Kazakh society could not disappear just by the tsar's decree. The Kazaks weren't morally and financially satisfied with the punishments in the Russian legislation and they reserved the right to blood vengeance and barymta with all the ensuing consequences. Sometimes the Kazaks just escaped trial. Independently they had a secret Biy court or Syariah Court solving their problems. As a result, the Russian government had to change its views on the common law of the Kazaks. The competence of the Extraordinary Congress of the Biys was extended before it the cases of killings, injuries and barymta were handed over to it. The order of the time, place and directly compiling Erezhe were controlled by the tsarist administration, the County administration and the Governor [9. P. 30-35]. The principle of collective responsibility was also slightly modified in view of the administrative division. Now not only relatives but also representatives of other auls subject to this territorial and economic division could bear responsibility [12. P. 88]. Erezhe of Bies congresses relied generally on the principles of the Kazakh common law with small impregnations of the Russian types of punishments (detention, dispatch, etc.). Property types of punishments remained the main types, having changed only externally. In the nineteenth century, the cattle was still the unit. The amount of the Kuhn has not changed. The number of cattle varied depending on the region. So, Pavlodar, Semipalatinsk and Karkarala Erezhe set the amount of the male Kuhn from fifty to one hundred camels. And Erezhe of Iliysky congress has determined the Kuhn in two hundred horses by four parts. In general, there were no significant differences in different regions.

An innovation was the possibility of replacement cattle with a cash equivalent characterized by the influence of the developing commodity-money relations. In certain cases property penalties were appointed together with imprisonment, while adultery — with a corporal punishment. The amount of the fine was changed to togyz [13. P. 75].

Crimes had got more difficult classification. Such concepts as intention, imprudence, non-assistance, self-defense limits, help during detention, non-informing, false denunciation have been standardly determined. Theft began to be classified by object of a crime, by way, by time of formation of intention. Sanity and age gradation were legislatively specified. Barymta has finally been determined as a crime. The horse stealing as a type of theft began to be distinguished from barymta. The danger of this crime has increased with the spread of firearms in the steppes. Usual stealing of cattle often turned into a plunder or robbery. Acquisition of obviously stolen cattle began to be punished up to payment of the claim for insolvent thieves. There was a new type of a penalty — to the benefit of treasury, which at insolvency of a defendant was replaced with arrest. The investigative authorities have been more developed and allowed to reveal and punish accomplices of a crime. In such cases, the punishment was divided between all participants of the crime (joint liability). In case of a separate division, a civil case began. New ones appeared in connection with the development of circulation of money (promissory notes, bills of exchange).

The legal status of women was the most important innovation in our opinion. Erehze of Karkarala
Kulmukhanbetova

Bies Congress 1885 is of special interest in this regard. At this Congress, Ibrahim Kunanbayev has actively participated like Kerekou, Karkara, Semipalatinsk, Zaisan, Ust-Kamenogorsk Bies. According to contemporaries, almost the entire law was written by Abai [13]. Erezhe consisted of seventy-four clauses. In this law, the improved rights of women have been affirmed. Women still had no right to testify in court but could already independently submit a claim. Women, at last, have acquired the right of divorce on own initiative including cases of abuse. This Erezhe has canceled another important institution — custom levirate (when the wife who lost her husband, became the wife of his brother). Abai went further because of his humanistic progressive views. He introduced an entirely new norm of the common law — involuntary manslaughter. At that time, it was not associated with punishment, whereas previously, the Kuhn was paid for all types of killing (apart from killing where the thief was detained at the crime scene).

Thus, property penalties in the Kazakh society until the 1917 revolution in spite of all the nuances remained a significant legal regulator of public relations of the Kazakhs.

The new stage in the development of the Kazakh statehood had begun in critical 1917. The common and legal system continued to exist though it has undergone certain standard, functional and substantial changes. Most attention to the common law was paid by the Soviet authorities in the first ten years of its existence. The policy of the Soviet state was expressed in its temporary preservation only in the forms of the civil, property suits in relation to property types of punishments according to the common law of the Kazakhs [14. P. 26]. The new laws came into force in the field of the criminal law. The socialist criminal legislation was also the criminal legislation of Kazakhstan from this point.

The fact that the property punishment had greater repressive force, that best promoted the purposes of punishment or as noted by N.S. Tagantsev, “were the most extensive type of destruction of property rights” [15. P. 358], proves their wide application in the early years of the Soviet state. To strengthen fundamentals and institutions, the new state went to the extremities: the announcement of dictatorship of the proletariat, purpose of severe types of punishments even for small crimes which could encroach on statehood fundamentals. For example, trying to get people to recognize the Soviet mail, there was a forfeiture of estate envisaged for sending any mail not through government channels [16. P. 34].

Forfeiture of estate was administered by the revolutionary Tribunal for sabotage, false information in the media, termination or reduction of production, profiteering, violation of current regulations, securities transactions, abuse of power, giving or accepting bribes, desertion, deserters hiding, evading service attack on the state monopoly of liquor, smuggling, that is for any crime encroaching on the government fundamentals.

Shooting was applied as punishment for murder without trial. Thus, the respect for the new power was cultivated under the threat of deprivation of the things that were most important for the person: life or property (part of property).

Special attention should be paid to such a unique instrument as the Decree of The Council of People’s Commissars dated April 16, 1920 “About the requisition and expropriation” [16. P. 70-71]. This normative legal act was adopted, in our opinion, with the aim to protect from unwanted intervention in the ownership of state bodies and officials applying the rule of law. As requisition and forfeiture of estate are the complete legal phenomenon essence and an order of application have to be uniform.

By 1922, the Soviet power has been established in all territory of Kazakhstan. And the constitution of the RSFSR of 1925 has proclaimed inclusion of Kazakhstan to the structure of the RSFSR as a political autonomy. From that moment, a number of normative acts were adopted regulating legal relations aimed at enhancing the authorities: Criminal code of the RSFSR of 1926; the regulation of the CEC of the USSR dated February 25, 1927 “About the crimes of the state (counter-revolutionary and crimes especially dangerous for the USSR against public order)”. These acts were translated into the Kazakh language in 1927 by special circular of people’s Commissariat of justice of the Kazakh Autonomous Soviet Socialist Republic.

In the first decade of existence, the Kazakh autonomous property types of punishments were
applied by the Soviet Socialist Republic both to meet criminal practice and political goals. Punitive policies were purposefully introduced to destroy the owner. One of the important instruments of this policy was the Decision of the CEC and Council of People’s Commissars of the Kazakh Autonomous SSR dated August 27, 1928 “On the confiscation of Bai farms”. Besides, it was officially considered that the crimes are committed mostly by “Bies, Kulkaks and wealthy ones” [17. P. 176]. Repressive types of punishments were provided for them, and concerning poor people it was desirable to replace imprisonment with penalties where possible [18. P. 777]. Thus in the first years of the Soviet state, the criminal law in general and particularly the property punishments were “defending the gains of socialism.” From 1927 to transformation of the the Kazakh Soviet Socialist Autonomous Republic to the Kazakh Soviet Socialist Republic in 1937, the criminal legislation continued to fight against resistance of the government and with attempts to keep old customs. Property punishments continued to perform repressive role. The fight against theft is closely intertwined with the fight against speculation. The law of the Biys have turned from acts of terrorism to the theft of collective farm and cooperative property. To deal with such crimes, the law dated August 7, 1932 was adopted “On the protection of property of public institutions, enterprises, collective farms and cooperatives, and the strengthening of social (socialist) property”, and the decision of the CEC and SNK dated August 22, 1932 “On the fight against speculation”. Nevertheless the government has stood firm on its feet and even decided on an amnesty in 1930.

Adoption of the Kazakh Soviet Socialist Republic Constitution in 1937 has formed the basis for further development of the criminal law in Kazakhstan. Since this period, property types of punishment lose repressive force and passed into the additional and alternative category.

It should be noted that in the Soviet state, the criminal policy is closely intertwined with the state. As required, certain types of punishment strengthened or weakened the retaliatory influence. In process of formation of the state, the need for drastic measures disappeared. The proprietary forms of punishment “... against criminals from among the overthrown exploiting classes, the Soviet court held thereby expropriation of the expropriators” were applied [19. P. 11].

Further corrective works became the main types of punishment applied by the courts. During the Great Patriotic War, punishment “should have been so organized that it could strengthen the defense of the country” [20]. That is property measures of punishment (penalty) were applied for the crimes specific to wartime: damage of the weapon, evasion from surrender of weapons and ammunition.

After World War II, property penalties applied more widely due to the economic difficulties of the recovering economy. So, the property types of punishments couldn’t take the final form before acceptance of the Bases of the criminal legislation of the USSR and the federal republics in 1958 and creation of the Criminal code of the Kazakh Soviet Socialist Republic on their base in 1959.

The criminal code of the Kazakh Soviet Socialist Republic which has entered into force on January 1, 1960, in articles 28 and 31 has finally defined the nature of a penalty and forfeiture of estate as a criminal penalty. In accordance with the law, a penalty could be applied by the court both as main and additional punishments in cases and to the limits established by the law (a special part of the criminal code of the Kazakh SSR). While the Criminal code of the RSFSR of 1926 was allowing the imposition of a fine (in particular, as additional punishment) at the discretion of the court. A penalty as the main punishment was provided in sanctions of section 104 of a Special part 134 corpus delicties under the Criminal code of the Kazakh SSR. As additional punishment it was provided in one section (parts 1 and 2 of section 156-1 of the criminal code of the Kazakh SSR) [21]. In articles of the Kazakh Criminal code, the penalty was generally provided by the Soviet Socialist Republic alternatively with other measures of punishment in particular with imprisonment and corrective labor.

The amount of fine was determined depending on severity of the crime and property status of the convict. The article 28 underwent changes several times during validity of the Criminal code of the Kazakh SSR: from 50 to 500 rubles, and for acquisitive crime — up to one thousand rubles; from 50-1000 rubles, and for acquisitive crime — up to
five thousand rubles; from twofold to hundredfold amount of monthly calculation index established by the legislation of the Republic of Kazakhstan at the time of the crime. The maximum size is set for sanctions in different ways depending on the nature and degree of public danger of the crime [22. P. 252-253].

The penalty in the Kazakh SSR Criminal code was mainly applied to perpetrators of mercenary, commercial and some other crimes that do not pose great social danger. The penalty wasn’t appointed for especially dangerous and other high treasons. Among such crimes, there were premeditated murders, grand larcenies by theft, robbery, rape, injuries and other serious crimes.

Before adoption of the Decree of Presidium of the Supreme Council of the USSR on March 9, 1973 “On amendments to the fundamentals of criminal legislation of the SSR Union and Union republics” courts could apply forfeiture of estate at their discretion. By this decree, it was established that forfeiture of estate may be appointed only in cases stipulated by the legislation of the SSR. For crimes for profit — also in the cases provided by the legislation of the federal republic [23. P. 119]. Forfeiture of estate was provided only as an additional measure of punishment in sanctions of article 52 of Special part of the Kazakh Soviet Socialist Republic Criminal code by 90 crime components. In 52 cases there was an obligatory confiscation and in 38 cases — facultative confiscation [21].

Forfeiture of estate was provided by the law as an additional measure of punishment. As a rule, it applied for serious crimes especially heavy and crimes for profit. The analysis of the Special part of the Kazakh SSR Criminal Code shows that forfeiture of estate could be applied only for the state, mercenary and other violent crimes as an additional punishment [22. P. 261].

Thus, having analysed property punishments in the history of the criminal legislation of the Republic of Kazakhstan, it should be noted that property types of punishment in the history of the Republic of Kazakhstan have the solid historical foundation based on social and economic features of the Kazakh society. Every historical experience is the source of society development. In this case, the historical experience of application of punishment of property gives us the opportunity to consider the most reasonable punishments and use them as the base to improve the modern penal system in Kazakhstan.

References

16. The collection of documents on stories of the criminal
Disputes about Delay Serving the Sentence by Drug Addicts

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Abstract. This article presents the analysis of the conditions of the Criminal Code, providing to the drug addicts as prisoners, i.e. the right to the voluntary drug intervention in exchange for the adoption of incentive measures in the form of the deferred punishment and possibility of escape the serving punishment. The provisions of the Criminal Law are subjected to critical estimate, the existing problems are marked and the solutions are proposed.

Keywords: postponement of the punishment, a drug addict, alternatives to the imprisonment.

One of the major problems of the modern society and the state is the addiction, and the intense fighting against it is one of the main areas of the state activity. The situation with this “disease” is getting worse also because of the fact that people who suffer with the drug addiction and being under the influence of the drugs commit some acts which are prohibited by the Criminal Code. According to the statistics of the Interior Ministry of the Russian Federation from January to December 2015 there were 234,800 crimes related to the drug trafficking; it is 7,4 % less than it was registered for the same period last year, but at the same time it is 9,9 % of the total amount of the committed crimes. Thus, approximately every tenth crime bears a relation to the drugs.

State policy against the drug abuse and its spread within the Russian Federation includes also the work with drug addicts who committed crimes. So, the Item “B” of the 43rd article of the Strategy of the state counter-drug policy of the Russian Federation until 2020 which was approved by the Presidential Decree No 690 d.d. June 9, 2010 ensures the introduction of norms to the Russian legislation, providing to the drug addicted defendant, who convicted of a crime of minor or moderate severity concerning the illegal trafficking of drugs and precursors, a choice between the treatment and criminal penalties; this policy provides also the establishing of a mechanism for monitoring the taken by this category of persons commitments for treatment and responsibility for their non-compliance. In furtherance of the above-mentioned concept of the Criminal Code of the Russian Federation the article 82.1 of the Federal Law No 420-Fl d.d. December 7, 2011 was amended, providing the exemption from the criminal punishment of drug addicted persons subject to certain conditions. Thus, in accordance with the Part 1 of this article, the court may postpone the serving of the sentence of the imprisonment for the recognized drug addicts who committed their first offense and are sentenced to the imprisonment, under the first part of the Article 228, part one of the Article 231, and the Article
of this Code, and who manifested their voluntary volition to undergo the drug intervention in form of medical treatment and social rehabilitation up to the end of the treatment and medical and social rehabilitation, but not more than five years. These changes can be evaluated positively, as the last one creates an opportunity for those who committed a criminal and substantive violation to be not subjected to the criminal repression and to improve at the same time their health and overcome the disease.

However, one cannot assert that the current version of the Article 82.1 of the Criminal Code regulates the institution properly. Here we are talking about an academic issue, as well as about some technical and applied complexities. In our article we mention only some of them.

Thus, the following phrase used in the article 82.1 of the Criminal Code requires an explanation: “who committed their first offense … under the first part of the Article 228, part one of the Article 231, and the Article 233 of this Code”. It is unclear on the base of the legally fixed wording what the legislators had in mind: a person committed a crime for the first time factually and legally? Since the linguistic and systematic interpretation of the provisions indicates that a person must first make, as it stipulated in the Article 82.1 of the Criminal Code, so the offenses and convictions for the other crimes should not be taken into account. We agree with EN Zhevlakova: “as well as in the Articles 75, 76, 76.1 of the Criminal Code, speaking in this case of the crimes of certain severity or certain type which were committed for the first time, the legislators meant that they were committed both in fact and legally for the first time” [1].

The criteria is misunderstood that only three offenses from the Chapter 25 “Crimes against public health and public morals” serve as the basis for guidance in this article of the criminal law. At first we can hypothetically assume that actually any offense can be committed by a drug addicted person, but the right to choose between criminal charges and voluntary treatment is only for those who committed the criminal acts referred to the Article 82.1 of the Criminal Code. Such a legislative solution is at least not logical and fair in relation to those who are prosecuted. Moreover, the Article 233 of the Criminal Code provides for the possibility of committing a crime by a person, who is guided by other (primarily selfish) motives, and who never use drugs at all. In our opinion it is necessary to extend the Article 82.1 of the Criminal Code for all crimes committed by persons who recognized as the drug addicts in accordance with the law.

We compare the provisions of the Articles 82.1 and 23 of the Criminal Code which integrates and aligns the commission of a crime under the influence of alcohol, drugs and intoxicants. Except for the cases where the drunkenness is not a chronic disease, these are three species of approximately same forms of human exposure. It raises the question: why the postponement of punishment can only be provided to persons suffering from the drug addiction? It would be more logical to use the above-mentioned article in relation to persons suffering from substance abuse and alcoholism as well.

The text analysis of the Part 1 of the Article 82.1 of the Criminal Code indicates that the possibility of its application is limited to the cases of the sentence of imprisonment. Considering the fact that the offenses referred to the Part 1 of the Article 228 of the Criminal Code, the Part 1 of the Article 231 of the Criminal Code and the Article 233 of the Criminal Code are considered to be in accordance with the Article 15 of the Criminal Code the offenses of little severity and also in the event of the commission for the first time, the court sentence to prison rarely, since the above-mentioned cases provide a quite wide range of punishments which are not connected with the isolation from the society. In this connection the position of the legislators interests us, because it allowed the use of the Article 82.1 of the Criminal Code to persons who are convicted to the imprisonment. Moreover, according to Burkina OA and Kuznetsov AI “... a number of people who committed the crimes, considered to be more profitable to agree to the appointment of punishment related to the deprivation of liberty, than to undergo a long course of treatment” [2]; since the appointment of the above-mentioned type of punishment (imprisonment), “taking into account the item 3 of the Article 79 of the Criminal Code, the convict can be released on parole after the serving of one third of his sentence, i.e. after 1 year” [2], while the term of
the medical treatment, and the following medical and social rehabilitation is at least 2 years. In addition, it is necessary to point out the absence of any statutory provisions or clarification concerning the source of funding for this treatment, which can also complicate the practice of implementation of this form of criminal liability.

An important problem is in our opinion also the process of the drug intervention and subsequent rehabilitation. The Part 1 of the Article 178.1 of the Criminal Enforcement Code states that the execution of the decision of the court concerning the postponement of the enduring the punishment is laid upon the penal inspection of the place of residence of the convicted person, which is sent a copy of such decision. If the drug addicted convicted person give no encouragement to the doctor who is directly interested in improving his health, the problems with the compliance of the prescribed treatment are not seen. The situation with the convicted person is the opposite, since the actions of the last one before and after the final decision of the court may be not the same: the convicted person cannot comply with the medical requirements or does not attend the reception. One more issue is what doctor he must apply and who defines it.

But we should not have a negative attitude to such innovations as the idea of the postponement of the introduction of this type of punishment; it is a step forward in the direction of the humanization of the criminal legislation. Of course, it is quite difficult to foresee all the possible problems related to the implementation of the provisions of the law in advance, they are permitted in the period of the enactment of such provisions, the amending of the relevant articles of the legal Article 82.1 of the Criminal Code is not an exception. Thus, initially there was a conflict of norms of the General Part of the Criminal Code, according to which the provision of the deferred punishment under the Article 82.1 of the Criminal Code could end the exemption from the criminal punishment due to the expiration of the limitation period a judgment of conviction” [4]. But by now the legislators ruled out this kind of contradiction: the Federal Law No 221-FL d.d. July 23, 2013, the Article 83 of the Criminal Code was supplemented with the part 2.1, according to which the period of limitation shall be suspended if the convicted person serving a sentence reprieved. In this case, the limitation period resumes running from the end of the grace period of serving the sentence, except for the cases provided in paragraphs three and four of the Article 82 and the third part of the Article 82.1 of this Code, or from the date of the cancellation of the deferred punishment.

Thus, the current wording of the Criminal Code has some contradictions and regulation gaps concerning the serving postponement for the drug addicts serving sentences, and they makes certainly difficult for the law enforcers. The necessary mean to overcome them is the timely reaction of the legislators which consists in the work on amending the text of the criminal law along with the advice of experts in the field of criminal law.

References
Political Science
The Americans and the USA as Viewed by Russian Students: Stereotypes and Propaganda

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Abstract. The article is concerned with basic stereotypes of Russian youth with regard to the image of America and the Americans. Distinctions between images of the USA formed through standard propaganda channels and images existing in minds of students are considered herein. The presented material is supported by findings of a local sociological study.

Keywords: stereotype, Russian-American relations, America’s image, collective consciousness, youth.

The term “stereotype” (from Greek stereos — “firm, solid” and typos — “impression”) was introduced into scientific use by American sociologist Walter Lippmann in his work Public Opinion. Walter Lippmann explained a stereotype as a form of perception of the world that imposes a certain character on the data of our senses before the data reach the intelligence [1]. According to Walter Lippmann, an individual trying to understand the world around him in all its contradictoriness creates “a picture in his mind” about phenomena he cannot observe. Such stereotypic perceptions are formed under the influence of the cultural environment of this individual.

Explaining the significance of such social phenomenon as a stereotype, researchers point to the fact that in everyday life people are usually unable to subject traditions, norms, values, rules of social and political behavior, etc. to critical analysis. This can become a big problem, primarily, for inter-ethnic relations. Ethnic stereotypes that are built on the basis of limited information known about individual representatives of that or another ethnic group and result in biased findings and conclusions with respect to the entire group and inadequate behavior towards it are widespread in this sphere.

According to various researchers who work over this problem [2], there are two main sources of formation of stereotypes, including ethnic ones. On the one hand, it is quite limited past experience of an individual or a group and limited information available to people in their everyday day life, as well as some specific phenomena occurring in the sphere of interpersonal communication and interaction. On the other hand, an important source of ethnopolitical stereotypes is purposeful activities of mass media and political propaganda. Depending on the era, historical situation and social group that or another source can become prevailing. This article is concerned with the influence of official propaganda that forms a conventional image of the United States and the Americans, as well as a real
image in minds of people, and alternative sources that form this image.

The image of the United States for the Soviet and post-Soviet mass consciousness contains several directions (that are different in terms of the emergence time but still preserve their former meanings under certain conditions).

The standard attitude towards America, which became one of the main elements of the Soviet consciousness, began to form in the era of intense industrialization carried out on the basis of foreign technology and with the participation of foreign experts. The global economic crisis that happened in the late 1920s and especially the Great Depression in the United States allowed leading Soviet officials to purchase and import equipment, technologies, engage professionals for the purposes of quick creation of the basis for the future military industrial complex in the USSR at a relatively low price. Initially high rating and recognition of benefits of the US economy and technology were, in fact, quite typical for the Soviet leadership. From the beginning of the Cold War the situation changed dramatically, a different image of America began to form and negative components of perception prevailed. The negative (for the most part) attitude to the United States became a part of the culture of the Soviet society. Formation and strengthening of negative stereotypes with respect to the Americans and USA became an important part of official propaganda "handed down" by means of major official mass media channels, through educational institutions, army, etc.

However, despite the massive propaganda, certain components of western life (house, car, well-being, leisure and “free time”, freedom of impressions and movement, fashion items and household appliances) attracted the attention of Soviet citizens, thus facilitating formation of a different direction — a positive stereotypical perception of America.

After the Second World War, the "American imperial threat" took a special place among ideas of the national public consciousness. This situation continued until Gorbachev's perestroika, during which the attitude to the United States changed dramatically. During Yeltsin's period, the United States began to be perceived as a foreign policy ally of post-Soviet Russia. But in the 2000s, the United States again appeared as the main foreign enemy of Russia.

In many respects this situation exists today. Disagreements arising between Russia and the United States which number has increased recently, in part look like Russian-American relations during the Cold War. Through continuous television reinforcement of anti-American sentiments, negative stereotypes with respect to the Americans and the United States are quite stable for Russian public consciousness as a whole. However, despite active promotion of negative stereotypes with respect to the United States and the Americans, official propaganda is not often effective in influencing Russian youth. Television is not the main source of information about other cultures for Russian youth. Most concepts of different cultures and bearers of different cultures are formed on the basis of feature and documentary films on the Internet.

The study that was conducted for two years among students of Novosibirsk State Agricultural University shows that perception of the Americans and the United States by students would sooner be positive than negative. It is a local study within a particular university and it is unlikely that its findings can be projected on students from other universities and other Russian cities. Nevertheless, it provides a certain assessment of perception of another culture and another country by modern Russian students (for whom the Cold War is just a historical fact). The study was conducted from October 2011 to October 2013 at two university faculties (Faculty of Engineering (1, 4 years), Faculty of State and Municipal Management (1-2 years)). During a lesson students wrote an essay in free form on "How I imagine the Americans and life in the United States”. 400 written works were subjected to a qualitative analysis with elements of content analysis. The results obtained at different faculties have no significant differences. The differences are only in answer detalization. Concepts of students about the Americans and life in the United States were summarized in several groups.

1. Image of a typical American. Initially, the students distinguished the following typical American traits: individualism (24), pragmatism (22), self-confidence (22), law-obedience (20), patriotism (18), diligence (16), intellect (16), a high level of culture
(12), sociability (12), manners (10), and kind-heartedness (10). In addition, the students pointed out such peculiar characteristics inherent in the Americans as friendliness (8), politeness (8), education (8), affability (6), disciplined approach (6), kindness (6), equability of mind (6), bad sense of humor (6), greed (6), cheerfulness (6), responsibility (6), goodwill (4), scrupulousness (4), positive view (4), laziness (4) emotional sensitivity (4), diplomacy (4), curiosity (4), punctuality (4), good organization (4), love of freedom (4), decency (4), and hospitality (4).

2. Way of life. Concepts on this aspect contained the greatest variety of responses. The only exception was the concept that the Americans love to eat fast food and that results in health problems (including obesity). This peculiarity of the American way of life was emphasized by one-fourth of respondents (100). The following options were mentioned several times: loose conduct of young people (14), tough life schedule (home-work-home) (10), serious attitude to work (12), ability to use a gun (4), hero promotion (people engaged in hazardous work, such as firefighters, police officers and others who save people) (4), popularity of charity (2), importance of church attendance (2), cleanliness (2), close cooperation with the police (2) as well as problems with cellular communication, prestige value of living in the countryside, casual attitude towards appearance, reverent attitude to clothes, etc. The students put an increased focus on availability of good opportunities for the Americans with regard to realization of personal potential (5), achievement of goals (2), getting good education (2), pursuing a profession (2).

3. Culture. Speaking about achievements of American culture, the students expressed their admiration, mainly, for American cinema as a whole, individual movies and actors (20), as well as music, a repertoire of songs and their singers (5). Also, the students emphasized respect of the Americans to their history, historical and cultural monuments (8), a large number of entertainment complexes (2), availability of a large number of subcultures and respect for them (2), as well as availability of a large number of cultures in the United States as a whole (2).

4. Image of the USA as a state. As a rule, it is mass media that work towards the formation of the image of the country as a whole and the attitude to it; the ideological component is manifested here to its best. However, the largest number of positive characteristics of the USA as a state were expressed here. The following groups of characteristics can be identified:

A) Level of development. First of all, the students think of the United States as a country with a very high level of development (60). However, some students just emphasize a high level of development (20), others — concretize what is included into the concept of high level of development: scientific technologies (16), education (14), medicine (14), armed forces (6), and roads (4).

B) Economy. Interestingly, the financial crisis that also affected the United States, a huge external debt of the country and other US economic problems (which are occasionally reported by news channels) have little effect on the perception of the American economy by Russian students. One-fourth of the students who wrote the work consider the United States to be a country with a well-developed economy (100). Far fewer people (6) talk about the problems of the US economy, its huge external debt, financial crisis, etc. Speaking about a high level of the US economy, the students noted the following: high standard of living (20), high income level, availability of housing, a car (16), availability of food and industrial products (10), a well-developed industrial complex (2), availability of own production of various goods (2), competent use of their own natural resources and capital (2).

C) Law-governed social state. The students also emphasize a lot of characteristics that define the country as a law-governed social state (40): high level of social protection of population (16), protection of human rights (10), opportunity to exercise their political rights and freedoms (of speech, choice, voting, etc.) in practice (12), high level of legal culture of population (10).

D) Politics. Despite the fact that the issue of US politics provokes, perhaps, the greatest amount of disputes and criticism, most of the students generally have a positive perception of this side of American life (80). But still there are negative assessments (20). Speaking about their positive perceptions of the United States (from the point of view of politics), the students mentioned the following
characteristics: a superpower (16), democracy (12), politics for the benefit of the people (10), a well-organized political system (6), good relations with other countries (2) tends to friendly cooperation with other countries (2), there is something to be proud before other countries (2). However, the greatest number of positive assessments was expressed in relation to the US president, Barack Obama (30): enjoys confidence of the people and a high level of support (8), strong political leader (8), responsible leader (5), great president (4), performs his duties excellently (4), strives to help people (4), improves life of the country (2), tries to maintain good relations with different countries (2). Among the negative political perceptions of the students about the US politics are the following ones: desire to appropriate someone else’s natural wealth (8), aggressive foreign policy (6), intervention in affairs of other countries (6), struggle for supremacy in the world (2).

So, the image of America is currently composed of the following stereotypes: country’s wealth, its power, its significant role and credibility in international affairs, political and civilization (scientific, technological) leadership, strong influence of its popular culture on other countries.

Another direction of stereotypes regarding the USA and the Americans describes this country as a culture of pragmatism, freedom and at the same time of multiple unconditional limits and informal regulations. In mass consciousness — it is a democratic country, both in terms of domination of mass and simplified tastes and customs and openness to achievements, personal success, mobility, freedom, rule of law and human rights. The other side of the stereotypical perception of the United States looks like this: America is the country where authorities ensure civil order, where the law applies to everyone without discrimination, where human rights and freedoms are really provided for.

So, a preliminary analysis of the obtained data shows that modern students positively think of the Americans and the USA as a country as a whole. This phenomenon may speak for ample opportunities in overcoming negative stereotypes with respect to the Americans and the United States of America.

References
Psychology
The Influence of Computer Games on the Eyesight of Schoolchildren Aged 9 to 10 Years

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Abstract. The article is devoted to the impact of computer on the eyesight of pupils of the 3rd and 4th grades playing the computer games.

Keywords: health, computer, game, pupil.

“Nations whose children continue to play the traditional games will fall behind with their development, whilst the other ones in whose culture the computers, artificial integrity and the other feats of information technology have entered will turn out to be more powerful”.

G. Stein

Within the matters of our research we assume that the eyesight of pupils become worse due to the long work on the computer.

The purpose of our research lies in studying of the impact of computer on the eyesight of pupils.

The tasks of our research are the following:
1. To analyze the impact of computer on the eyesight of pupils.
2. To suggest the main means of the eyesight protection.

The subject for study is the negative impact of the computer games on the eyesight of pupils, as well as the main means of the eyesight protection.

The rationale of our research lies in the fact that nowadays pupils often use their e-book readers, laptops, tablets, as well as smartphones and computers with Internet connection both at school and whilst doing their homework. The problem lies in the fact that pupils cannot control their free time which they expend in playing the computer games, and as a result their eyesight becomes worse. Both the parents and the pupils themselves must consider whether it is so rewarding to risk their health. Probably it is high time to know how to make the computer be your friend.

The human eyesight had formed in the course of a long-continued evolution, but unfortunately it is scarcely adapted to the work with the modern digital devices such as computer, laptop, tablet, smartphone, mobile telephone etc., as the digital images aren’t perceived by a human eye as a part of the natural environment. A pixel screen is unlimited
as opposed to the paper, i.e. a book or some such thing.

Visual organ of a pupil who plays the computer games is able to refocus itself from 15,000 to 20,000 times. As a result the eyes get tired; this problem is extremely intense among the pupils aged 9 to 10 years, because their eye muscles are still in the course of the growth and development. Their formation comes to end by the age of 12, thus the myopia can slightly increase but may not be accompanied with some discernible changes of the visual organ of a pupil. For this reason the nonobservance of the time-frame and the uncontrolled usage of the computer have a negative impact on the eyesight of children.

In 1998 the American Optometric Association introduced the new term called CVS (Computer Vision Syndrome); by this a complex of visual and ocular symptoms is meant which are caused by the work on the computer. The Computer Vision Syndrome is divided into two groups: the optical and the physical one. The symptoms of the first group are the visual blur, visual accommodability, ambiosis, and over-fatigue caused by reading. The symptoms of the second, physical, group are the sting, sense of “sandpaper” in the eyes, eye socket pain, frontal headache, and pain on ocular movements.

The Figure 1 shows the differential diagnostics of pseudo myopia and myopia among the pupils aged 6 to 16.

In comparison with all the ocular diseases the high-grade myopia results in 30% of cases of the poor vision and blindness.

During the last ten years the myopia is observed with ever increasing frequency amongst the preschool children who had an ocular strain along with the sedentary life style, malnutrition, and the health weakening due to the frequent sicknesses such as tonsillitis, dental caries, rheumatism etc. The myopia is observed amongst the children aged 6 to 7 years in about 3% or 4% of cases, amongst the children aged 8 to 9 years — in about 6% to 9% of cases, amongst the children aged 10 to 11 years — in about 13% to 17% of cases, amongst the children aged 12 to 13 years — in about 19% to 23% of cases, and amongst the children aged 14 to 16 years — in about 21% to 22% of cases.

It is common knowledge that some social and geographical factors have a certain impact on the increasing of the ocular strain of pupils, and in every country, city or village, as well as in every house and family there are some problems which become the reason of the progressive myopia. For example, Japan is at the top as for the prevalence rate of myopia. This is due to the unvaried food and artificial lighting which is widely used in the educational institutions. Amongst the pupils from one hundred city schools there are more children who have myopia than amongst the same amount of pupils from the suburban schools. Thus, the myopia is
observed to a greater extent amongst the physical infantile children, than amongst the children who go in for sports, especially in swimming.

These data give evidence of the fact that the hereditary factors which determine the contraction and progression of the myopia are not fatal; the influence of the environment cannot but be taken into account (Shilnikov 2013).

Let's consider three main releasers of the pathogenic mechanism of myopia at an early age, these are:
1) Doing of an excessive amount of near-vision work (hyposthenic accommodability);
2) Hereditary background;
3) Scleral weakening, disorders of trophism, and ocular tension.

Thus, the myopia can be divided into the accommodative, hereditary, and the scleral one.

According to the Figure 2, 52% of pupils aged 9 to 10 years take time out during their work on the computer.

The diagram below shows the amount of pupils who use the main means of the eyesight protection working on the computer.

The longer a pupil works on a computer, the higher is the probability of the visual deterioration and contraction of the myopia. The studying and
rest conditions must be provided according to the hygiene and sanitary requirements both at school and at home. For the purpose of the prevention of the myopia we recommend the parents and teachers to provide the pupils enough time for walks and sports activities, and the normal sleep, as well as to provide the optimum conditions for the ocular activity of pupils (Shilnikov 2013).

All the children should undergo the eyesight evaluation yearly; the parents and teachers should keep a check on the correct seated posture of children during their work at the table both at home and at school. One should instruct the pupils to sit correct during the writing and reading both at school (even beginning with the pre-school) and at home. It is also necessary to develop the tourist industry where the pupils might not only rest but also be observed by the ophthalmologists, pediatricians, and school teachers (Shilnikov 2013).

In conclusion we would like to provide some recommendations for the parents concerning the prevention of the myopia amongst their children.

1. If your children have to work on the computer or to read for a long time, they should take time out every 40 minutes for 5 or 10 minutes.
2. Having the ocular fatigue, it is necessary to perform a simple exercise with a mark on a glass several times a day. One should stand in front of the window on which glass a small paper mark was placed beforehand. One should look at it and then one should shift the gaze on some object located behind the glass and rest on it for several seconds. After that one should look at the mark on the glass once more and then one should look at a distant scene again. The exercise should be repeated for several times.
3. One more simple exercise should be performed as follows: fix your head so that only your eyes could move. Holding a pencil at arm’s length, move it repeatedly leftwards, rightwards, upwards, and downwards. Your eyes should steadily follow the pencil.

These exercises do not take much time, but help to de-stress the eyes and prevent the appearance of the accommodation spasm and myopia.

One should also keep in mind the necessity of sports activity, sensible nutrition, and good mood.

References

HUMANITIES

History and Archaeology
“Victims of Repressions” of Five Volumes

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Abstract. The article highlights the forcible collectivization commenced in 1929 along with the dekulakization (liquidation of rich peasants as a class), deportations, and the “Great Terror” during the years of 1937 and 1938, as well as the political, economic and spiritual consequences of these measures.

Keywords: collectivization, kulaks (rich peasants), dekulakization, collective farm, state farm, cooperative, deportation, high-security penal colony, repressions.

The documents of the years of 1937 and 1938, i.e. the years of repressions, a lot of data such as the reasons for repressions, the natures of the punishments, names of the victims were collected and arranged in chronological order by professor RT Shamsutdinov and a group of scientists.

The collective punishment and the other measures of the totalitarian regime were the tools of the intimidation and pressure historically. Thus, the cases of the suppression of risings of the people by the imperialist countries on the occupied territories through the usage of military, political, and economic repression, as well as the counteraction of the national liberation movement are well-known from history. Over the period of 130 years of occupation of a large part of Turkestan by the Russia, at first as Tsarist Russia, then as the Soviet Union, a lot of people were subjected to the repressions and terror which were based on the colonial policy on a regular basis.

The repressive policy of the USSR continued until its collapse in late December 1991. On the 12th of June the President Islam Karimov announced the decree on the memorizing of victims of repressions and organization of the corresponding commission. According to it the Cabinet Council adopted a resolution which immortalized the names of the victims of repressions. Besides that a community was organized in Yunusabad district which activity was aimed to know the names of victims and to create a book called “Victims of political repressions” and so on.

On the 21st of August the charity found called “Shaxidlar xotirasi” was established. The opening ceremony was held near the Bozsu channel and the President made a speech.

The decree of President of the 1st May 2001 concerned the introducing of a memorial day in tribute to victims of repressions. On the 31st of August 2001 a museum was opened near the Bozsu channel, and since 2001 the 31st of August is the state memorial day in tribute to victims of repressions.

Recently many researches were conducted concerning the life and work of victims of repressions. A lot of historians, philosophers, and literati helped to conduct such kind of research. Actually
the research of the honored artist of Uzbekistan, professor of Andijan State University Rustambek Shamsutdinov played an important role in this field.

Over the period from 2005 to 2009 professor R Shamsutdinov along with a group of scientists published a book devoted to the repressions of the years of 1937 and 1938” with the support of the international expedition “Meros” and charity found “Shahidlar xotirasi”. The first, the third, and the fourth editions were published in Russian language, the second and the fifth editions were published in the Uzbek language.

This book incorporates the documents over the period from 1937 to 1938; the editor of this book was the Honored Scientist and famous author professor Naim Karimov. The people’s commissar N Ejov called the “iron people’s commissar”, the erstwhile head of NKVD (People’s Commissariat for Internal Affairs) who signed the Order No. 00447 concerning the repression of former kulaks, criminals, and other anti-Soviet elements, was the main cause of repression.

It should be mentioned that the documents used in this book were get from archives; they were announced for the first time.

The book called “Repression. 1937–1938. Documents and materials” consists of the introduction and 5 sections. Within the introduction N Karimov, R Shamsutdinov and E Yusupov who prepared the materials for this book think over the meaning of these materials. The archive documents for this book were taken from the State archive of the Republic of Uzbekistan, Central Archive of the Federal bureau of Russian Federation, social and politic archive of Russian Federation, as well as the archives of Fergana, Andijan, Kherson and Nikolayev.

The first section incorporates the data concerning the USSR, Uzbekistan SSR, and People’s Commissariat for Internal Affairs (NKVD), as well as college of NKVD, deputies and chief of NKVD; this information helps the researchers to describe this period of history.

The second section contains the description of the repressive policy and documents concerning it. The repressive policy is clearly reflected in the documents of the USSR, letters, telegrams and resolutions.

The third section is about the extra work of the repressive policy: the records of trials and court judgments, valedictory letters, the process of departure to camps of the repressed people, their camp cloth, their life in the camps and their deaths.

The fourth section incorporates the materials of the military tribunal concerning the officials who were sentenced to be prisoned (there were 155 persons convicted according to the 1st category, 10 persons convicted according to the 2nd category), as well as the biographies of 220 repressed people.

The last, the fifth section contains the map of GULAG (an abbreviation of the Russian words for Chief Administration of Corrective Labor Camps) and description of camps and prisons. There is also information concerning the juvenile correctional facility (1930–1943) in Tashkent.

The second edition called “The victims of repression” (Uzbek edition) contains the records of trials of NKVD, which were held from the 10th of August till the 5th of November 1937. The first chapter is a kind of introduction which contains the description of the repressive policy in Uzbekistan over the period from 1937 to 1939.

The main part of this book is the second chapter which is called “Horrible judicial decisions”. Here is the information concerning 3,083 persons who was persecuted for political reasons according to the judicial decisions. The information was taken from the records of trials of NKVD which were held on the 10th, the 20th, and the 29th of August, on the 8th, the 12th, the 13th, the 15th, the 24th, the 26th, and the 29th of September, on the 1st, the 14th, the 19th, the 25th, and the 28th of October, and on the 3rd and the 5th of November 1937. The protocols were translated from Russian into Uzbek. It should be critical to the prisoners’ fault. They were named the “public enemies”, “nationalists”, “enemies of the revolution”, “basmachi” (antisoviet resistance in Central Asia in 1930s), “spies”, “traitors” etc., whereas they were the real patriots of their nation.

The cases of the persons sentenced on the base of the first degree were completed anonymously according to the governmental instructions of the head of the NKVD department, they were saved in individual converts; the cases of the persons sentenced on the base of the second degree were
completed according to the order of the NKVD camping department.

The documents and materials contained in the third book called “Repression. 1937–1938” belong to the November 1937; this month was the top of the repressions in Uzbekistan when a lot of innocent people were killed within a month due to the repressions. The book contains the records of the 33rd, 34th and the 43rd court sessions. According to the details contained in the book, the people who had been sentenced to be prisoned lived in deplorable conditions. Most of them died of illnesses, thirst, hunger, and the survived ones became the invalids. Most of the deaths were documented in the encampment of GULAG. Some facts show that 25,375 prisoners of the list of 908,624 ones died in 1937. 90,546 prisoners of 115,681 ones including a lot of Uzbeks died in 1938.

According to the facts in 1937 during the culmination of the terror 20,954 Uzbeks were in the torture chambers of the NKVD. 2,643 of them were deported to the Baikal-Amur camp, 1,923 of them were sent to the building of the Moscow Canal (Dmitrov camp), etc.

The convicted persons worked hard in very bad conditions creating the foundation of the communist society. According to the information from the book “Repression” on the 1st of January 1937 in the labor camps there were 23,855 Uzbeks amongst all the bagged by the NKVD. All of them were under an accusation of treason, counter-revolutionary sabotage and the similar reasons.

The documents and materials contained in the fourth book called “Repression. 1937–1938” belong to the December 1937 and concern the victims of terror in Uzbekistan.

The book incorporates the records and court judgments of the trials which were held from the 1st to the 27th of December. These documents concerning these cases were also got from the secret archives. In sum the fourth book contains the information concerning 22 court judgments.

525 criminal cases were considered on the 12th of December 1937. 3,082 cases were finished during eight days. Most of the repressed in December 1937 people were from Bukhara and Andijan. 51 persons were shot at that time, 463 of them were sentenced to ten years of camp imprisonment, 108 persons were sentenced to eight years of imprisonment in Andijan; in Bukhara while 8 persons were released, 121 prisoners were sentenced to be shot, etc.

The appendix at the end of the book provides the total amount of the convicted persons, their origin, the amount of convicted persons from villages, districts etc. The appendix helps the young generation to learn their history in details.

More than 2000 fates of our compatriots are stated in the fifth book called “Victims of repression (February and September 1938)”.

As the sentences concerning the Uzbeks were invoked in February 1938, the sentences concerning the more than 30 foreigners were invoked in September 1938. All of them were accused of the espionage.

Unlike the other books, here you may face the facts of the repressions concerning the foreigners. These orders were not classified. The appendix at the end of the book provides the total amount of the convicted persons, their origin, the amount of convicted persons from villages, districts etc. According to the data provided in this book, the sentences invoked in September 1938 concern the people of more than 30 nationalities.

In conclusion it may be said that the books including documents and materials concerning the repressions collected by researchers along with Rustam Shamsuddinov is very useful for the upbringing of the younger generation. The difficulties which the Uzbeks faced in 1938, as well as the horrible conditions of the villages are represented in these books. They prove that the communist society was not correct and it led to the wreck. These five books are the sacred ones because they are the fundament of a lot of new similar books.

Following the independence of the Republic of Uzbekistan, the radical reforms began to be implemented in social and political, economic, and cultural spheres. In the course of the years of independence the update process started in social sciences especially in history sciences; the historians were ordered to carry out an objective research on the history and to deliver its results to the people. It was important to restore the historical truth which was hidden by the Soviet Union.

The President of the Republic of Uzbekistan IA Karimov said the following: “Our duty lies
in the restoring of the historical justice concerning the fate of our people, complete exposure of the recent history, formation of the consciousness in the learning of the history, immortalization of the memory of people who became the martyrs for our motherland”.

In recent years in order to learn the severe measures which were taken by the Soviet Union in Uzbekistan and to create an objective picture of the history the President IA Karimov issued on the 12th of May 1999 the decree concerning the perpetuating of the memory of the martyrs; and by the decision of the Cabinet Council made on the 22nd of March 1999 the decree got its legal fundament.

The history of the early 20th century is not appropriate to the mentality of our people and it was a violent period. It tested the self-determination of the Uzbeks again.

The picture of cruelty and repressions of the early 20th century was expressed in the book by X. Kurbonov called “The repression”.

The difficulties and their reasons, as well as the factors of “Great terror” of the years of 1937 and 1938 were analyzed in this article.

People, who died for independence of our country, and whose name we will always remember with honor, were summarized in these books in a scientific way.

References

What is the American Dream for Americans — a reality or an illusion? Moreover, what does it exactly mean? Who should you be, what should you have, how should you exist in this world so that you could say that your American Dream has come true? These are good questions to be answered.

The history of the term “the American Dream” is very vague. The very concept firstly appeared in 1931 in the book by James Adams “The Epic of America”: “... The American Dream, that has lured tens of millions of all nations to our shores in the past century has not been a dream of merely material plenty, though that has doubtlessly counted heavily. It has been much more than that. It has been a dream of being able to grow to fullest development as man and woman, unhampered by the barriers which had slowly been erected in the older civilizations, unrepressed by social orders which had developed for the benefit of classes rather than for the simple human being of any and every class” [1]. However, the idea of a happy life appeared much earlier. For example, “American Tragedy” by Theodore Dreiser was written in 1925, but already some beginning of the capitalist idea of a happy future is traced. Basically, the emergence of the desire for security and success can be attributed to those who came to America from the Old World. Most often these people were unfavorable social status, who were hoping to change their lives, coming to an uninhabited new land. This is why the Americans began to seek for success and why this nation has the ability to do everything from scratch. However, considering the time of occurrence of the term, it is also possible to assume that it is associated with the period of the Great Depression. The American Dream was made at this time as an incentive to overcome the crisis for the American people. And it has gradually become a part of the culture of the Americans so the American Dream was transformed from just a driving force in the objective being the epitome of success and a better life. All the classes came once in the fight for the American Dream, this fact raise labor productivity to a new level and brought the country out of crisis. And in this regard it has become important how and where was the Dream, it is important that their primary task it fulfilled one hundred per cent.

Since the Great Depression the American Dream has undergone enough changes. But a lot of it stayed permanent. For example, the success presents from the beginning to the present day in it. This largely due to the Protestant model of the state, which is the principle of predestination. If you are able to achieve success on the ground, then you will surely go to Heaven. This morality arose for a new civilization — morality of success, the labor and the desire for enrichment. In addition, poverty has been attributed by colonists to vices — it is a sin to be poor in a country of enormous potential. To be poor in America means to be lazy, to have a lack of will and character, insolvency and inferiority. The American Dream is also often used to describe the American ideology, which is a factor of unification of all the people. The new labor morale remains predominantly for the Americans up to these day — that is what has become their hallmark. The Americans can hardly be called one of the workaholics, especially compared to the Germans or the Chinese. Moreover, the American Dream helps people succeed and achieve their goal, because it is clearly understood.

America has become the epitome of inconsistency. Religiosity, which is still present among the Americans, gets in a place with a materialistic
worldview. Respect for others and friendliness co-exists with aggressiveness in combat and competition. Honest work and respect for the law go together with common crime and attempts to achieve their own goals, ignoring all the rules. Faith in «fair play» lives next to the tendency to manipulate others. The extreme individualism confront to conformism. Such contrasts have emerged and established themselves in the New World precisely because of freedom, which is an integral part of the American life, from the struggle for independence, and all the contradictions go in one direction — toward the fulfillment of the American Dream.

In principle, the embodiment of the American Dream is a happy capitalist future. That is, it is inextricably with concepts such as individual freedom and enterprise, «self-made person», a well-paid job, a reputation and the transition to a higher social class. However, since people are different in themselves, the American Dream may vary, and has a lot of different views and embodiments. One such variation is the following model of life. This model is more modern and is based not only on the success and a social status, but also in the general conception of a happy life, but in an exaggerated form. The American Dream is identified by people with their own large house, built at their own expense and on their own land, a spacious courtyard, a car, or even a few of them, and finally a big happy family, and friendly neighbors. That is, the atmosphere of friendliness and positive should be not only inside their own home, but preferably around the immediate area. Perhaps it is in order to be closer to realizing the Dream and build relationships with neighbors, the Americans decided to go normally greet new to enter, often the whole family, and with some gift.

The American Dream can be called the embodiment of the theory of Maslow’s pyramid — the gradual satisfaction of human needs. At the very beginning there are physiological needs — thirst, hunger, animal instincts. Then, — the need for security. Next — membership in a particular social group and affection. The next stage is the need for respect and approval. Then — the need for aesthetics. And finally, the desire for disclosure of internal capacity. This is a pyramid of an American lifestyle. A man finds a job to support himself, his security is provided by the state, he knows it. However, in the US there is a law which declares that people have a right to bear arms — any American, respectively, if the doubts about the competence of the state, may defend himself. Then the man poured in some social groups — hobby groups, sports teams, the sea and the sea of different societies have in America, all for successful socialization. From the stage of the need for respect and approval the American Dream begins. The previous stage as it includes, but they are easier to be realized, especially nowadays.

Also mundane and everyday concepts in the American Dream are based on all the representations of the freedom of the Americans. Here are all — freedom of thought, freedom of choice, freedom of enterprise — everything, that contributes to the independent development of human life and promote themselves forward on the career and social escalator. Such a philosophical component of the American Dream distinguishes it from the simple definition of a consumer society, which also tends to well-being and comfort. The standard of the American Dream is still the Declaration of Independence of 1776, which referred to the basic principles of life of the American people: «We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness».

The American Dream is what any American wants to achieve. In Protestant canons and the principle of Dreams, a man has to do everything himself, go to his goal by his path and on his own. However, you can find a few examples of unfair game, when a man wanted to get all while not making any effort. In fact, they paid for this. For example, the hero of the book by Theodore Dreiser’s «An American Tragedy» Clyde Griffiths in his pursuit of life did not spare his loving pregnant woman, killing her to marry a rich heiress Sondra Finchley. The death of the miserable Roberta Alden was not left unnoticed, the perpetrator was caught, and he got what he deserved — he was imprisoned and then was sentenced to death. In the second book of «An American Tragedy» Clyde’s mother wrote to him: «We want you to succeed more than you know, but we also want you to be a good boy, and live a clean, righteous life, for, my son, what matter
it if a man gaineth the whole world and loseth his own soul?» [4]. And Clyde forgot about this perfect piece of advice blinded by wealth. This is a clear example of how the American Dream does not like dishonesty and shortcuts.

In the definition of the American Dream there is the word «family» and there is the word «friendly» but «love» is not mentioned. Can it be performed with the American Dream? Jay Gatsby, the hero of the novel «The Great Gatsby» by Francis Scott Fitzgerald, who could be called a man who had the American Dream come true, lost everything because of love. He tried to return his beloved Daisy Buchanan, because of that he appeared to be in the complicated story and as the result he was wrongly suspected of murdering the girl and was killed by her husband in his own home. Everything collapsed — after Jay had died nothing had any sense — neither his wealth, nor he. After all, Daisy did not even come to the funeral, leaving with her family for another city. The novel by Francis Scott Fitzgerald can illustrate the fact that love does not go hand in hand with the American Dream. It does not fit into the concept of a confident and happy future. Spontaneous and explosive feelings destroy stability.

Also an important question can be raised here — whether the American Dream is happiness? After all, should there be anything unreasoned and unpredictable? Love does not work, so will happiness do it? It turns out that it will not. An example to illustrate this is a literary work, «Rich man, poor man» by Irwin Shaw. One of the main characters, the middle child in the Jordache’s family, Rudolph — the one who can be called a man whose Dream has come true. He has a family, a home, a car, there is success, there is wealth. But Rudolph does not know what happiness is. Rudolf replaces normal human happiness by a smile on duty, which should convince everyone around that he is happy. The younger brother Thomas is just the opposite. He did not aspire to the American Dream, he had a little dream — a yacht on the French Riviera. And it was realized. Thomas got what he wanted — the sea, the friend, the beloved woman, the son. He died, unlike Rudolph, but he learnt what happiness is and what a loving family is.

Zach Braff’s Film 2014 «Wish I Was Here» is the story which is largely about how people turn away from the American Dream, realizing that it is just an illusion, a picture, and you cannot be happy according to the rules. Also here we can see the fact that after two-thousand years many Americans have stopped believing in the Dream, understanding that it is unattainable and unreachable. And in the culture, especially in low-budget films, some people got the idea in their mind that you do not need to go to the Dream any longer. As it was already mentioned in the film «Wish I Was Here», for example. Initially, the characters live according to all the stereotypes: a big happy family, saving money for the future, paying for an expensive school for the children and so on. However, after the inflection point, their life is fundamentally changed. They spend money on what they like surfing for mother, for example, which she dreamed about for a long time, but could find neither money nor time for her favorite activity. They give children a home-education, start travelling and get real happiness instead of the American Dream.

There is a striking contemporary example of the realized American Dream — a boy, born in a poor family, the adoptee are not rich people either. He had problems at school, often moved and at the end of his life became one of the richest man in the world, stood led by the powerful his company and died at the peak his fame. Of course, this is Steve Jobs. The man who managed to create something new out of nothing, to go upstairs using not deceptive ways, and only his hard work and ability helped him to realize his own vision.

Examples of the American Dream coming true are countless, but in the word’s culture there are more references and allusions to it. Even children’s cartoons, for example Disney’s, show on a regular basis, even in part, the success of the heroes of desire. For example, the heroine of the animated film «The Princess and the Frog», being from a very poor district of New Orleans, dreaming of running a restaurant, saves money by working two jobs. And in the end she gets her Dream, and lives in happiness.

The question which can also be raised is whether the American Dream was born on its own or was imposed by the government. Again, it was originally a natural need for those who came to settle in new territories, wanted to forget everything that was left
in the Old World, and start with a clean slate. The Dream moved people forward to success. However, since the Great Depression, the term was no longer ignored by the politicians and cultural figures. Thus the expression of the American Dream become a part of life. And if you usually say that «something came into the mass», here we can say that the term of this mass came and stood over her. The American Dream has become the symbol of encouragement that people could distract them from the monotony of everyday work.

Does the plenty of the American Dream in culture mean that the thought of it in the minds of the Americans are regularly reinforced? Man, apparently, is not born with the idea of it, because there are also enough examples of how children of rich and successful parents do not try to do anything by themselves and live in a laziness and calmness. So that America’s interest is to heat the interest and commitment of citizens to performance in the country is not falling. There are no less people who are obsessed with American Dream than those who do not care about it. The Americans continue to seek new and unusual, even though it does not always bring them a favor and joy.

There are no analogs of the American Dream; it is said to be a unique cultural phenomenon. Every nation has something unique that reflects the main goal of its cherished or the main feature. In Russia it is the Russian spirit, in Italy — the family, Germany — shutter speed, efficiency, thoroughness and clarity, in Scandinavia — restraint. And besides Russia and the United States none of the countries has a clear statement of its ideal. But why does only the American Dream have a component of wealth and success? In Europe there were the targets of this kind too, but now we do not have the Spanish Dream, Greek Dream, Danish and Swiss Dreams. Most likely it is so due to the fact that in America all people come to the same as it is a country of immigrants, where one starts a new life. In Europe you cannot escape from your origin, from your social position, and most dreams of great riches were only dreams, and some society classes could not even dream of such.

The American Dream, originally being a characteristic only for the Americans, has gone to the world, but is seen by other countries is largely wrong, in their own way. The Americans aspire to a better life at home, people from foreign countries seek a better life in America. For many immigrants the personification of the Dream coming true was the Statue of Liberty, as it was the first thing they saw coming to the New World. The most important thing here is that immigrants of the XIX–XX century went to America to cult of success, that is what was important for them in the New World. The first settlers were going to create Paradise on earth, their minds were filled with religiosity. Nowadays, even if someone is traveling with other purposes, for example, to escape persecution in Europe, or to be reunited with their family, after being in this melting pot all immigrants merged with the Americans in a common quest for success and enrichment.

So many words were said about enrichment, but is it important for the American Dream? As there are so many components, what would happen if some of them turned out to be a fiction, a lie? Which of all the factors of achieved goals must necessarily be present? Consider a short list of demands according to the American Dream: a happy family, success, fame, wealth, own house. All these items are very shaky — a family can fall apart. One wrong word, movement, sight — and your fame turns against you. Money can evaporate, taking into account the fact of the instability of the world of finance. A hurricane, a flood, a fire — and there is no house, though, as if there never was. Which factor should be protected hardest not to cease being a man? I believe that the main one is still the family. It should not be indicative friendly, it must be true and dear. For such a purpose that in difficult times there were people who are with you not because of your success, but because they are always with you. Moreover, in a very pragmatic American dream there should be something human.

What can be said about the reality of the American Dream? Many people realized it, making themselves rich and successful. However, the American Dream is not just a success, it is about that a person should be richer and more successful than others. According to this definition, the target for the whole society is unattainable. You can not be richer than someone when everyone are rich. For some people the American Dream will always be just a dream, even in a country of enormous potential, and even
if the person with a huge potential inside. And as the goal, the American Dream, perhaps, is not the ideal. But as the engine of progress, as an incentive, as an explanation, for which everything is done — it’s still there. The American Dream will continue to exist till the people will need it as a guiding star.

References

Partnership of the Republics of Central Asia and the United Nations for the Environmental Issues

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Abstract. The countries of Central Asia such as Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan became the members of the UN on the 2nd of March 1992, and since that time they participate actively as the UN republics in discussions concerning different security problems in Central Asia, including the issues of the nuclear nonproliferation, illegal drug trafficking, and terrorism. Upon the initiative of the countries of Central Asia a number of UN resolutions and agreements were accepted; the republics of Central Asia are the important transit countries of delivery of the humanitarian cargos from the UN to Afghanistan.

Keywords: Central Asia, UN, relationship, ecological problems, Aral Sea problem.

Central Asia is an important region within the international affairs. The republics of Central Asia became the members of the United Nations Organization in March 1992 at the 46th Session of the General Assembly of the UN. For the last eleven years the close contacts with all the main structures of the Organisation had been established. The next year the United Nations Offices were opened in the republics of Central Asia. Nowadays there are much more UN funds and agencies operating in Central Asia. The UN systems in Central Asian republics work as one, collaborating to support the efforts of the national reforms. The Central Asian states cooperate intensively with the various specialised institutions of the UN system within the framework of the UN General Assembly agenda. As the member of the United Nations Uzbekistan put forward the major initiatives in the field of the ensuring of the international peace and security, such as:

- Initiative for the creation of the nuclear-free zone in Central Asia;
- Initiative for the reconstructing of Afghanistan;
- Initiative for the creation of an international centre for struggle against the terrorism;
- The initiatives concerning the cooperation between the UN and Central Asian republics for the problems of regional security and ecological problems concerning for example the Aral Sea, water problems;
- Central Asia in the context of the development of millennium goals;
- The initiatives concerning the cooperation of Central Asian republics and the UN agencies, including UNESCO.

The Department for Disarmament Affairs of the UN take an active part in the development and financing of the contract draft related to the creation of the nuclear-free zone in Central Asia, which
is planned to be signed this year.

One of the gravest global environmental disasters of the modern times is the tragedy of the Aral Sea facing the countries of Central Asia and their population of some 60 million. The environmental, climatic, socioeconomic, and humanitarian consequences of this disaster endanger directly the sustainable development of the region, as well as the health, gene pool and future of the people who live in this region. The crisis of the Aral Sea region affects directly Turkmenistan, Kazakhstan, and Uzbekistan, as well as has an indirect influence on Tajikistan and Kyrgyzstan.

The Aral Sea was one of the largest lakes in the world until the year of 1960. It was 426 kilometers long and 284 kilometers wide, with the total area of 68,900 square kilometers; the maximum depth of the Aral Sea was 68 m and the volume of water was 1,083 cubic kilometers.

The Aral Sea region had a large variety of flora and fauna: there were 38 species of fish and a range of rare animals in the water of the Sea, it was also the habitat of one million saiga antelopes, and its flora included 638 species of higher plants.

The Aral Sea played a vital role in the development of the regional economy, industries, sources of employment, and sustainable social infrastructure. In the past the Aral Sea was amongst the richest fisheries in the world: 30,000 to 35,000 tons of fish were caught annually in the waters of the Aral Sea region. More than 80 percent of those people who lived along the Aral Sea shore were employed in catching, processing and transporting of fish and fish products. The fertile lands of the deltas of the Amu-Darya and the Syr-Darya and the rich grazing lands provided the employment for more than 100,000 people in the livestock rearing, poultry breeding and raising of agricultural crops.

The Aral Sea also served to regulate the climate and mitigated the sharp fluctuations in the weather throughout the region, exerting a positive influence on the living conditions, agriculture and the environment. In winter the arriving air masses heated up over the waters of the Aral Sea, and in summer they cooled down over the same waters.

The problems of the Aral Sea arose and expanded into a threat in the 1960s as a result of the feckless regulation of the major cross-border rivers in the region, i.e. the Syr-Darya and the Amu-Darya, which had previously provided about 56 cubic kilometers of water a year to the Aral Sea. A jump in the population in the area, as well as the urbanization, intensive land development, and the construction of major hydro-technical and irrigation facilities within the water courses of the basin of the Aral Sea which had been carried out without any regard for the environmental consequences in previous years led to the desiccation of one of the most beautiful bodies of water on the planet. The entire sea was practically destroyed during the life of one generation. The process of the environmental degradation continues, and the Aral Sea region is becoming a lifeless wasteland.

Since the 1990s all the countries suffering from the destructive consequences of the Aral disaster have been regularly speaking out at the UN and in other international and regional organizations in order to alert the international community to the problems of the Aral Sea and their close association with the regional and global security. On the 28th of September 1993 during the 48th session of the General Assembly of the UN, and on the 24th of October 1995 during the 50th session the representatives of the countries of Central Asia appealed to the international community to provide the assistance in saving of the Aral Sea and its surrounding region, they warned that this problem could not be resolved without the support and assistance of the international financial institutions and developed countries, and with the United Nations as a coordinator.

Enormous efforts concerning the practical counter-measures at the regional and national level are being exerted; a key example was the establishment of the IFAS (International Fund for Aral Sea) by Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan in January 1993.

The main goals of the IFAS are to preserve the biological heritage of the Aral Sea region and to reduce the destructive impact of the ecological crisis on the environment and which is most important on the livelihood of the inhabitants of the region.

The efforts of the IFAS bore its fruits in the form of three programs aimed to assist the countries of the Aral Sea basin (ASBP-1, ASBP-2, and ASBP-3). Being the key founder of the IFAS, Uzbekistan
attaches a great importance to the increase of its activity. During its chairmanship in the IFAS (from 1997 to 1999) Uzbekistan made some active efforts in order to develop the legal basis of the Fund, to establish the relations and collaboration with the international organizations and financial institutions, as well as in order to promote the sustainable development in the Aral Sea basin. In October 1997 the International technical meeting of the donors was held in Tashkent. The main outcome of the meeting was the launch of the international project “Water resources and environment management in the Aral Sea basin”.

The International conference on the Aral Sea which was held upon the initiative of Uzbekistan in March 2008 in Tashkent gave a significant impulse for the considering of the Aral problem at the international level. It was proved by the participation in the conference of representatives from more than 90 international organizations, including the leading financial institutions of Japan, Germany, China, Arab states, as well as some well-known research centers. The forum adopted the Tashkent Declaration and the Action Plan which determined the primary projects for about 1.5 billion dollars aimed to the mitigation of the harsh consequences of the Aral Sea disaster.

At the national level Uzbekistan takes tremendous measures to combat the negative impacts of drying of the Aral Sea. Hundreds of programs and projects have been realized since early 1990s.

A 1.3 billion-dollar-plan aimed to finance the projects and measures in the Aral Sea region was approved for 2013. Among these measures are the following: the creation of small local bodies of water in the delta of the Amu-Darya, the construction of water intake facilities equipped with the desalination installations, the creation of protective forest plantations, as well as the ornithological monitoring of bodies of water in the southern part of the region.

One of the global problems is the issue of the Aral Sea in Central Asia. This problem appeared in the 20th century, and it is still urgent. On the 48th session of the UN the President of Uzbekistan Islam Karimov appealed to the countries: “The problem of the Aral Sea caused many negative consequences. We must appeal to the World Society; we called them for saving the Aral Sea and the surrounding region”. Islam Karimov emphasized the problem and invited to organize a special commission on the Aral Sea.

After that in January 1994 the meeting of the heads of the republics of Central Asia concerning the problem of the Aral Sea was held in Nukus. During this meeting the program of particular actions for the next 3 to 5 years was formed and stated; it concerned the improvement of the environmental situation of the Aral Sea with regard to the social and economic development of the region. The third meeting on this problem was organized in March 1994 in Daşoguz. In February 1997 an important meeting of the heads of five republics of Central Asia was held together with the delegations of the representatives of the UN, the World Bank and other international organizations. During that meeting a decision concerning the organizational development was made, i.e. they stated the more efficient strategy of the activity of the IFAS which had been organized in 1993 in Kyzylorda.

“Declaration of the states of Central Asia and the International organizations on the problem of the sustainable development of the Aral Sea basin” which was adopted in order to settle the problem of the Aral Sea on the 20th of September 1995 in Nukus has an important and global significance. In fact, the destruction of the Aral Sea is a very important problem in Central Asia, because about 50 million people live in the Aral Sea region. Over the period from 1960s of the 20th century to the 2000 the inflow from the Amu-Darya and the Syr-Darya to the Aral Sea decreased from almost 60 cubic kilometers to 8.5 cubic kilometers. According to suppositions of UNESKO over the period from 2000 to 2005 the annual flowing to the Aral Sea decreased again to 5.2 cubic kilometers. The problem of the Aral Sea is one of the global problems which concern the whole planet. For this reason the cooperation of the UN and the countries of Central Asia have an international importance. On the 11th and 12th March 2008 the international conference was held with the participation of active delegations of the UN in Tashkent; the theme of the conference was the problem of the Aral Sea, its gene pool, fauna and flora, and the international measures aimed to the solution of the problem”. Within that conference
the President of Uzbekistan Islam Karimov spoke of the implemented measures aimed to the settling of the problem of the Aral Sea. In April 2010 the Secretary General of the UN Ban Ki-moon visited Uzbekistan. First of all he took part in the presentation concerning the implemented measures aimed to the improvement of the environmental situation in the Aral Sea region in Nukus. Ban Ki-moon said that he was ready to settle the results of the ecological destruction and to solve the problem of the Aral Sea.

The Aral Sea was a very beautiful lake which had rare flora and fauna, but now it is on the decline. When Uzbekistan was a part of the USSR the water from the Amu-Darya and the Syr-Darya was used actively for the irrigation of the cotton fields; as a result the inflow to the Aral Sea decreased. During 40 years the water area of the Aral Sea shortened 7 times, the water volume decreased 13 times, its mineral content increased ten times, and as a result the water of the sea became uninhabitable for most of the organisms liver previously in the sea, and almost all animals lost. Nowadays the Aral Sea poses not only the environmental problem, but also the social and economic, as well as the demographic ones.

The problem of the Aral Sea is the problem of million people who live there, and who ask to help them such influential organization as the UN. Within the cooperation of the UN and the countries of Central Asia the IFAS was given the level of the UNGA (United Nations General Assembly) observer, and that was intensified by all country members during the 63th session of UNGA.

However, the continuous deterioration of the environmental, social and economic, and humanitarian consequences of the desiccation of the Aral Sea and deterioration of the human habitation in the region make obvious that it will be impossible to resolve the problem which affects the whole planet without the substantive assistance from the United Nations and the international community.

Therefore, on the 16th of September 2013 upon the initiative of the President of the Republic of Uzbekistan in capacity of the current President of the IFAS the “Program of measures on eliminating of the consequences of the desiccation of the Aral Sea and the averting of the catastrophe of the ecological systems in the Aral Sea region” was circulated as an official document of the 68th session of UNGA.

The Program was supported by the UN Secretary General Ban Ki-moon. This “Program of measures on eliminating of the consequences of the desiccation of the Aral Sea and the averting of the catastrophe of the ecological systems in the Aral Sea region” includes the following fundamentally important measures on the combating the negative impact of the desiccation of the Aral Sea:

1. Creation of conditions for life, reproduction and preservation of the gene pool in the Aral Sea region;
2. Improvement of measures aimed to the control and preservation of the water resource. Protection of the natural body of water in the catchment area of the Aral Sea;
3. Implementation of large-scale measures in order to plant the forests on the desiccated bed of the Aral Sea and prevent the desertification of the region;
4. Preservation of the biodiversity, restoration of biological resources and protection of flora and fauna;
5. The further institutional reinforcement and strengthening of cooperation between the countries of the region within the framework of the IFAS, as well as the stepped-up efforts to alert the international community to the Aral Sea disaster.

During the presidency in IFAS Uzbekistan together with all Central Asian countries and the international donor community will take necessary steps in order to implement the above mentioned measures.

Ensuring of the equitable and reasonable use of the transboundary water resources is an acute problem in the conditions of the worsening environmental situation and shortage of potable water in Central Asia.

It is an open secret that the Amu-Darya and the Syr-Darya two major transboundary rivers of Central Asia were historically a common good and the source of life for the nations of the region. The Aral Sea basin is supplied with the water resources of these rivers.

In this regard Uzbekistan cannot but be concerned with the plans of Tajikistan and Kyrgyzstan to construct two new large hydropower stations
equipped with gigantic on a global scale dams, i.e. the Rogun Hydropower Station with the 335-meter high dam in the upstream of the Amu-Darya, and the Kamabarata-1 Hydropower Station with the 275-meter high dam in the upstream of the Syr-Darya.

According to experts, the implementation of such plans will lead to disruption of the natural flow of these rivers which is fraught with the most dangerous environmental and social and economic consequences. The already fragile water and ecologic balance in Central Asia will be radically disrupted. Moreover, the construction of these facilities is planned in the areas of a tectonic fault where the seismicity is not less than 9 scores on the Richter scale; all these factors can result in the high risk of manmade disasters.

Taking this into consideration, Uzbekistan firmly adheres to the principle position of the unacceptability of constructing of hydropower facilities at the transboundary watercourses without the preliminary endorsement by all of the interested countries. According to the international legal practice it is also necessary to conduct a fair international expert examination of the projects Rogun and Kambarata-1 under the aegis of the UNO in order to assess a possible impact of new hydropower facilities on the natural water regime, environment, flora and fauna.


At the close of the 20th century after the abolishing of the previous Union and finishing of the “Cold war” new countries appeared in Central Asia.

Along with the appearance of new countries the environmental, economic, military, and transport problems appeared also that time in Central Asia. In order to solve these troubles Central Asia and the UN cooperated together. The following ideas were in our opinion the main ones:

— The cooperation between the countries of Central Asia and the UN was very close. The main directions of the cooperation between the countries of Central Asia and the UN concerned the social, environmental and political matters, peace in the regions, as well as their safety and steady development;

— All the regional and global problems in Central Asia were indicated by the UN.

For the solving of the problems they decided to work together. These problems were:

- The problem of Afghanistan;
- The problem of the Aral Sea and environmental situation;
- The initiative on creation of the nuclear-free zone in Central Asia.

Some problems of Central Asia were settled by the UN.

For the more successful implementation of the integration processes of the interstate cooperation in Central Asia it is necessary to accomplish some large-scale and long-term regional projects in the various areas of economic, communicative, and humanitarian cooperation; it will assist in the development of cooperation with the various regions of the world and for the strengthening of the security in Central Asia.

Generalizing the above mentioned, we can conclude that the efficient cooperation between the countries of Central Asia, the UN and the other international organizations can among other issues serve successfully the reforms of the social, economic, and political sphere, as well as the development of global and regional safety and stability.

Reference

Languages and Literature
Supra-Phrasal Unity: Revisited the History of the Concept

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Abstract. The subject of the present article is the supra-phrasal unity (SPU), as well as its linguistic status and semantic structure. The supra-phrasal unity is a structural text unit, which poses a group of several formally completed utterances integrated around the same semantic point. The article presents the main concept, which is the basis of the organization of the SPU, i.e. an association of several sentences concerning the same topic, a number of utterances which are devoted to the same micro-theme.

Keywords: supra-phrasal unity, text, history, thematic-rhematic relations.

The issue of the supra-phrasal unity (hereinafter SPU), of its linguistic status, as well as of its formal and semantic structure, is one of debating points of the modern Russian philology. That is some authors of textbooks describe the SPU as one of the units of the syntactic system of language, the other authors regard it as a unit of the structure of speech, while some authors do not mention it at all.

The SPU is considered to be a group of formally completed sentences, which are united grammatically and due to their common sense and which pose a relatively independent text passage forming as a rule a separate paragraph. For example:

They sat on the Terrace and many of the fishermen made fun of the old man and he was not angry. Others, of the older fishermen, looked at him and were sad. But they did not show it and they spoke politely about the current and the depths they had drifted their lines at and the steady good weather and of what they had seen. The successful fishermen of that day were already in and had butchered their marlin out and carried them laid full length across two planks, with two men staggering at the end of each plank, to the fish house where they waited for the ice truck to carry them to the market in Havana. Those who had caught sharks had taken them to the shark factory on the other side of the cove where they were hoisted on a block and tackle, their livers removed, their fins cut off and their hides skinned out and their flesh cut into strips for salting. (Hemingway, 1971)

Let’s get down to the history of the studying of this unit in order to get outside of the problem of the SPU.

In the middle of the 20th century there were two main conceptions within the development of the European linguistics. The first one was the idea of the structural approach to the language, which went up the theories of Ferdinand de Saussure; the second one was the idea of functionalism, i.e. the approach to studying of a language through the description of the functions of its units in the building of a speech unity. In particular due to this factor in the 1940s and 1950s the linguists from different countries advanced independently a theory on the existence of a close relation between formally
Thus, the German scientist K. Boost wrote that a sentence was not an independent speech unit and in this respect he told about the “association or community of sentences” (Satzgemeinschaft) the following: “The threads which stretch from one sentence to another are so large in number and form such a dense network that we could speak of some perplexity, of the tangle of sentences in a united net, where each sentence is indissolubly related to the others”. (Boost, 1949)

Nevertheless this idea came into its own in works by NS Pospelov, who came up with the term of the supra-phrasal unity in 1948; by the SPU he meant “a real syntactic unit of the connected monological speech”, i.e. “a group of sentences which form an authorial utterance”. According to NS Pospelov, the most important characteristics of the SPU were the following:

1) Semantic independence (“Being isolated … it does not change its meaning, because its semantic content is independent from the other utterances, which encircle it within the context of the connected authorial speech”;
2) Syntactic independence which resulted from the first characteristic (“thus, it is syntactically independent from the context”;
3) “Closeness of the syntactic structure”;
4) “Intermittent nature of the syntactic relationship between the sentences which are part of it” (in particular, the absence of conjunctions between the sentences is regular, and in case of use of the coordinating conjunctions the relationship became conjunctive).

For the first time this concept was introduced in his master’s thesis, but it became widely known after the publication of two articles in 1948, which were especially devoted to this concept (Pospelov, 1948).

The author asserted in them a valid proposition that the SPU from the viewpoint of its functionality was close to an expanded composite sentence. The suggested by NS Pospelov idea was so much in keeping with the spirit of the age that it was immediately endorsed by such distinguished scientists as VV Vinogradov and LA Bulakhovsky. VV Vinogradov wrote about the “unsearched field of the stylistic syntax”, whose major problem was the problem of the structure of supra-phrasal unities and typical for them methods of stratification and cohesion of syntagmas as the ceiling syntactic units within the structure of these supra-phrasal unities (Vinogradov, 1947). LA Bulakhovsky wrote in his turn about “those unities of a verbal expression”, which were larger than a phrase but were well-defined and had specific features of the syntactic nature, the so-called larger-than-the-sentence unities (Bulakhovsky, 1952). The suggested by LA Bulakhovsky term turned further into the widespread term of the supra-phrasal unity (SPU).

The next stage of studying of the SPU was in the 1960s. This stage was marked by works of the Czech scientist F Daneš and Russian researchers GY Solganik and LM Loseva.

GY Solganik called the SPU “the prosaic strophe”, and his research was based on the idea that the speech constructions founded on the logical constructions. Researching the logical constructions he found the “associations of sentences”, i.e. the “logical unities”, within which the sentences were connected either “through the subject” (parallel communication), or “through the predicate” (chain communication). According to GY Solganik, every connected speech fell easy and natural into the parts which were the logical unities, which were usually paragraphed in writing (Solganik, 1973). In other words, according to the author, the SPU was a natural implementation of the logical unities within the speech. Thus, the communications within the “prosaic strophes” and the communications within the logical unities were the same, i.e. the chain and the parallel ones.

As opposed to GY Solganik, F Daneš (Daneš, 1974) founded on the theory of the actual division of the sentence, i.e. not on the communication between the utterance and logic, which was equivocal and could not exist at all in the living speech, but on the aspect of the organization of every utterance, which was presented always within it and was directly relating to the actual communicative situation. As a result, the scientist educed three types of communication between the utterances at the level of the components of the actual division:

1. Simple linear thematic-rhetic progression where the theme of each utterance repeated the rheme of the previous one.
2. Recurring theme where the theme of all utterances were equal.

3. Thenatic-rhematic division which was a particular case of the recurring theme where the last one divided into specific subthemes, aspects which were reflected in the sequence of utterances.

The division of some common idea into specific aspects was observed within the rhematic vertical as well: it was quite clear that such rhemes as “compelled attention”, “kept the dew of youth” were the variations of the common rheme “was attractive”. The similar division could be observed in case of the recurring rheme as well.

The results obtained by GY Solganik and F Daneš were essential similar: at the bottom they described the same phenomenon through different conceptual and terminological systems. It became especially clear considering that the thematic-rhematical division was a particular case of the recurring theme, i.e. the type of communication which conformed in the works by GY Solganik to the parallel communication. In sum we could say that the phenomenon demonstrated by both scientists was the identity relation (and first and foremost the partial identity) which threaded the SPU and provided its semantic unity. The discrepant information was clear observed against the background of identical information, whilst the SPU was created just in order to convey this discrepant information.

A number of articles and the doctorate thesis (1969) by LM Loseva are also worth mentioning. In her works she demonstrated the same partial identity relation opened between the recurring semantic components of the SPU which stood at the beginning of a sentence.

Thus, by the early 1970s the theory of the SPU was added with some key statements concerning how the thematic-rhematical relations between the utterances were instrumental in the formation of cohesion and internal unity of the SPU, as well as the statements concerning the sense relations of the (partial) identity which were provided through the interaction of the utterances at the thematic-rhematical level. Besides that there were a great number of special observations, and amongst them the most important one was about a special role of the beginning (the first utterance) in the organization of the SPU.

GY Solganik grouped the SPU according to dominating types of communication (chain strophes, parallel strophes), and the SPU within these classes were distinguished by the type of the beginning.

At that time the studying of SPUs was intensified due to the fact that the text linguistics became a specific school within the study of language. When earlier the SPU had been considered by NS Pospelov, VV Vinogradov, LA Bulakhovsky et al. to be a yet one unity of the speech structure, which was superstructed over a compound sentence, at that time the problematics of the SPU was naturally included into the sphere of interests of the text linguistics. Thus, a new issue of the linguistic status of the SPU appeared. The researchers wondered, should the SPU be reckoned a unity of the syntactic structure of the language or the speech, or was it a text unit at all.

The special acuteness of the problem consisted in the fact that in the 1960s the following studies were created:
- The theory of the structural scheme of a simple sentence as an abstract model belonging to the syntactic structure of language,
- Structural-semantic classification of compound sentences which allowed speaking of the models of compound sentences belonging to the language system which as well as the structural schemes were calculable and regularly repeatable in speech.

Thus, the overall picture of the syntactic concepts acquired the known perfection and harmony. The following hierarchy of the language syntactic models and the parallel hierarchy of speech manifestation of these models were formed:
- Word-group — syntagma
- Structural scheme of a simple sentence — simple sentence
- Model of a compound sentence — compound sentence.

The extrapolation of this hierarchic scheme to the language lower-level unities and their speech manifestations (phoneme — sound, morpheme — morph, lexical item — allolog) conveyed the impression of full completeness of the overall picture of the concepts concerning the structure of language system and its relation to the speech, but the
theory of the SPU “interfered” with this completeness, raising some hard questions.

The following hierarchy of the syntactic units seemed to be quite logic:

– Model of a compound sentence — compound sentence
– Model of a supra-phrasal unity — supra-phrasal unity.

Nevertheless, in order to do it scientifically-based (but not to manifest it), it should be proved that the models of the SPU were real and they were calculable (as the amount of the models should be calculable and observable) and regularly repeatable in speech. That’s why the problematics of the SPU became the order of the day of many linguists, and the discovered by F Daneš models of thematic-rheumatic relations were perceived as the models of organization of the SPU.

A short time later it emerged that these were not the models of the SPU, but some universal methods of the thematic-rheumatic intercommunion between the utterances which were typical not only for the text, but for the speech in the whole. These methods combined without any limits in text, but they were presented per se very seldom, thus, they could not be considered to be the models of the SPU. There were also no occasion for interpreting as the language models of the SPU such broad categories of the functional and semantic types of speech as description, narration, and reasoning.

Meanwhile the searching of methods of structural modeling of the SPU continued.

The leading direction was the detection of the bare syntactic orderliness of the SPU, which the researchers tried to find within the relations between the beginning, whose leading role was beyond all questions, and the other utterances which were involved into the SPU. In order to detect this structure which could be further modelled, the following was required:

– To typify the beginnings;
– To define some specific of the syntactic design of the other utterances of the SPU, which could correspond to the type of the beginning.

Although there were the beginnings, which were presented through some specific syntactic construction, but even such beginning didn’t predict the syntactic design of the other utterances of the SPU. Mostly both the form of the beginning and the form of the other utterances handled without any specific constructions and didn’t determine each other. Thus, the organizing role of the beginning in relation to the sense was beyond all questions, but it didn’t play this role in relation to the syntactic form.

Thence, the SPU was a category which was still under formation. Some of the types (with the picturesque specific constructions as beginnings) could be considered to be the included into the syntactic system of the language ones; as a matter of fact, only such types could be named the SPU. The other types existed still in speech (or in text). SG Iliyenko suggested the term of complex thematic unity.

The new progress achieved during the studying of the semantics of the SPU and its correspondence with the thematic-rheumatic organization had also influence on the cancellation of structural modeling of the SPU at the syntactic level. GA Zolotova determined that the typical semantics of a text passage was regularly repeatable in the rhemes of the utterances which composed this passage. For example, while describing of an interior the words bearing the objective meaning took up the position of rhemes; while describing somebody’s look or temper the words bearing qualitative and characterizing meaning took up the position of rhemes; while narrating about some action sequence temper the words bearing the meaning of activity took up the position of rhemes. In this context GA Zolotova introduced the term of the rheumatic dominant of a text passage.

This stage of the studying of the SPU resulted in two important conclusions:

1) There was not any reasonable ground in order to consider the SPU to be a part of the system of the language syntactic units;
2) The intercommunion between the typical semantics of a text passage and the communicative organization of an utterance played an essential role in the structure of the SPU.

Considering that both the typical semantics of a text passage and communicative organization of the utterances were the text phenomena (because the communicative organization appeared only when an utterance was included in text) one could say that the grand total of all studying of this stage
became the conclusion about the belonging of the SPU to the system of text. The type assignment of all aspects of the organization of the SPU was possible, but it didn’t result in the finding of models which could be calculable and regularly repeatable in speech whilst these two characteristic were required of the units of the language system.

Nowadays many linguists prefer the term of the supra-phrasal unity, although there isn’t any indication of the syntactic nature of this unit in it; but unfortunately the starting point is here the phrase, which is mainly the phonetic concept. In the past there were a lot of attempts of renaming of the term of the SPU (prosaic strophe, communicate etc.), but two of them are still the generally accepted and moreover the generally comprehensible ones, these are the supra-phrasal unity and the complex syntactic unity.

Thus, the supra-phrasal unity is a structural text unit which poses a group of several formally completed utterances integrated around the common semantic point.

The main idea which underlies the organization of the SPU is the “association of sentences”, “some about the same”, i.e. a number of utterances devoted to the same micro-theme. In this respect it is instructive to recall the words of KM Abdullayev: “Until quite recently the ceiling syntactic units from the viewpoint of the hierarchy was considered to be an independent sentence. Even the facts of the structural association of several predicate syntagmas were classified by the researchers as sentences. Thus, a paradoxical situation was created, which concerned mainly the complex sentences. So, for example, according to A Peshkovsky, the association of several simple sentences united through coordinating conjunctions was reckoned one sentence in some linguistic books. This was just a paradox”. (Abdullayev KM, 1999) KM Abdullayev in his turn inclines towards the macrotext, i.e. towards the association of two and more SPUs which has its own composition.

We lied cuddling together and the ground didn’t seem to us hard, cold and damp as it was.

We had been dating for six month already since she arrived in our regiment. I was nineteen and she was eighteen.

Our meetings were secret: I was a company captain and she was a nurse. Nobody knew about our love as well as about the fact that there were three of us already… (Bogomolov, 1985)

Two main characteristics of the SPU are noteworthy:

1) Polycommunicativeness, i.e. the side-by-side presence of utterances which are the formally independent communicative units;

2) Monothematism, i.e. the subordination to the realization of one micro-theme.

The aspects of the organization of the SPU lend themselves to the type assignment. The thematic-rhematic relations between the utterances were described by F Daneš; the logic and semantic relations within the SPU were described in works by GY Solganik, OI Moskal’skaya and a number of other researchers; the logic and semantic relations at the thematic-rhematic level were described by LM Loseva and GA Zolotova.

The statement that “the SPU is a group of formally completed sentences united grammatically and due to their common sense, and posed a relatively independent text passage forming as a rule a separate paragraph” is questionable. KM Abdullayev wrote that the SPU and the paragraph belong to the different levels and systems. The SPU can consist of several paragraphs, as well as several SPUs can be found within one paragraph (Abdullayev, 1999):

Many pale eyes look with intense eagerness at Chagatayev, in order not to close because of weakness and indifference. Chagatayev felt the pain of the sadness: his people needed not communism; they needed only oblivion till the wind cooled their bodies and disposed their ashes all over the space. Chagatayev turned them back on; his actions, his hopes were in vain. Now he must pick up Aydym in his arms and go away from here forever. He went aside and lied on the ground facedown. He understood that wherever he left for, he would come back anyway. His folks are the greatest beggars under the sun: they went through all of their body during the voluntary works and in necessitous circumstances of deserts, they were broken a habit of life goal and they lose their feelings and interests, because their wishes were never fulfilled, and they lived thanks to mechanical work of their daily meagre meal consisted of turtles and their eggs, and bass fishes which they took from the same pond, from which they drank.
Did in his folks remain at least a small soul to acting together with it and to achieve the common happiness? Or did all the feelings and even imagination, which was the mind of the baggers, died? Chagatayev knew by experience of his child memories and Moscow education that any exploitation began with the distortion, with the adaption of a soul to death for the purpose of mastery, otherwise a slave wouldn’t be a slave. And the forcible deformation of the soul continued till the mind of the slave would turn into the madness. The class struggle began with the negotiation of the “heavenly spirit” which was enclosed in the slave; and the blasphemy towards those things, which the master believed in, was never forgiven, but the soul of the slave was subjected to fray in lie and breaking work. Chagatayev remembered the story of Old Vanka; he told he had wanted to kill a peacock at the yard of a mosque in Khiva in order to sell it then to some Russian merchant for a stuffed bird. Hastily Old Vanka let fly a stone at the peacock, a sacred bird, but didn’t hit his mark. Far off somebody appeared amongst the plants. May be he was a watchman or just a stranger. Old Vanka grasped something that he had found on the ground amongst the bushes and sent it flying at the peacock’s head. The peacock ate the thing Old Vanka threw and then screamed with its scabby saccadic shout, and Old Vanka jumped at it in order to choke it to death with his own hands. He couldn’t do it, as the Muslims drew up, dragged him away in the street, and began to hit him. And when they had decided Old Vanka to be dead, they set him down into a dried gutter. Whilst he was being hit, Old Vanka pressed his hands against his face. Due to the smell of his hands he understood that for the second time he threw a piece of dried poop. Old Vanka survived then, but further he liked to let fly something dirty at birds, especially at pigeons, until over the years he went dead on this fun (Platonov, 1990).

MG Svotina determines the SPU as a speech category, and the paragraph is, according to her, a language category. KM Abdullayev differs with her; he considers such approach to be an act directed against the studying of the SPU.

Thus, the SPU must be admitted under some reservations as a structural and thematic unity which consists of two or several sentences inter-related grammatically and through the common communicative contemplation, i.e. the standardized thematic-rhematic structure.

References

Attitude of Kazakh Teenagers to Kazakh Language

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Introduction

Kazakh language is an official language of Kazakhstan. Nowadays keepers of our tradition and language are mainly adult generation, our grandparents, because it seems that Kazakh language has become less important for young Kazakhs. It dates back from the time, when Kazakhstan was a part of the Soviet Union. That time many people communicated in Russian at work and in school. Because of this history, nowadays teenagers use Russian or other languages to communicate. If we look at this problem from global perspective, we can understand that this problem is common not only for Kazakhstan, but also for many other countries. This topic is utterly important, because in near future we may lose our language. According to World science, (2015), while there are an estimated 7,000 languages spoken around the world today, one of them dies out about every two weeks. I have chosen this topic to know, whether the teenagers consider it is necessary to learn Kazakh language in the current situation in Kazakhstan. I started this research to promote our language and other extinct languages.

Literature review

Kazakh language is a part of Nogai-Kipchak subgroup of northeastern Turkic language. “The Kazakh language was based, firstly, during the 1860s on the Arabic script, and later the Latin script had been introduced in 1929”, but nowadays we use Cyrillic alphabet (UCLA, 2010, para. 3).

On one hand, in Kazakhstan, the problem of languages is the most contentious and important. According to Constitution of Kazakhstan, article 7, “In state institutions and local self-administrative bodies Russian language shall be officially used on equal grounds along with the Kazakh language (p. 2)”. This status means that Russian language will continue to be used as a main language for communication and official documentation of government offices in some regions. According to statistics in Pavlodar region there are 2, 87562 Russian people, and 1, 96872 Kazakh people (Alimova, 2014). Because Russian people outnumber Kazakhs, it is safe to assume that Russian culture heavily influences on people of this region and their choice of language.

On the other hand, in South regions of Kazakhstan, language choice is affected by neighbor countries like Kyrgyzstan and Uzbekistan. Migrants from these counties mostly arrive to work in Kazakhstan. Migrants from Uzbekistan stay in Shymkent and migrants from Kyrgyzstan stay in the cities like Almaty and Taraz (Altyn Orda, 2014). Moreover, “oralmans are considered as foreign or stateless people of Kazakh nationality those who at the moment of gaining the independence of the Republic of Kazakhstan have resided outside the territory of the RK and arriving at Kazakhstan for the purpose of permanent residence under the article 1 of Population Migration Law of the Republic of Kazakhstan № 204 dated 13th December, 1997” (Public services and information online, 2014). Kazakh nation has different diasporas in various countries, like China, Uzbekistan, Kyrgyzstan, and etc. These days, people who called oralmans come back to motherland,
but they mostly do not speak Kazakh. To sum up, Russian, Uzbek, Kyrgyz, Mongol languages heavily impact on the Kazakh language and its popularity on the territory of Kazakhstan.

“Loss of the language ultimately means loss of a culture, of entire way of thinking” (Krauss, 2000, p. 2). In addition, if teenagers use their mother tongue for communication, it means not only saving our language, but culture identity too. The loss of language is equivalent to the loss of culture of the people, if we do not speak the native language, there will be no unity between us. To sum up, you can safely say that the loss of the Kazakh language is equivalent to the disappearance of Kazakh culture. Disappearance of languages is a global problem, all of the above applies not only to Kazakh language and Kazakh people. It also applies to many other small cultures around the world. It is something like the «butterfly effect», if now teenagers do not appreciate the native language, and will not speak it, in the future we may lose our language and our culture irrevocable.

Aims

My purpose is to explore problems with Kazakh language spread and use among teenagers in Kazakhstan through the following research questions:

How often do teenagers use Kazakh language in different regions?

What is correlation between age and attitude to Kazakh language?

What is the value of Kazakh language nowadays?

How can we protect Kazakh language?

— by getting interview results, which can help to compare the situation in Kazakhstan.

Methodology

I have chosen two methods to take data: primary and secondary. Primary research uses one type of information collection, i.e. interview.

Using primary method I provided all respondents a complete anonymity. I interviewed two parents, two students and one expert in Kazakh language. I conducted interviews only with consent of the interviewees. One of the reasons why I have chosen parents for interviews is their point of view to the issue, because they might have different perspectives on this problem due to previous experience and age. Interviews were conducted with one student from Kazakh-medium grade and one student from Russian-medium grade. Moreover, one of my interviewees is the expert, Kazakh language teacher, who observes changes between attitudes of generations during working process.

The secondary method is analysis of credible sources. My work includes reliable information from official documents and research papers.

Discussion

In this part of research work, I will analyze information from five interviews and use the data from my context. I had twenty questions for each participant and all this questions give answer to my research questions.

For the first research question my participants split in opinions, three of them including student1 (Russian-medium grade), parent1 and expert said that teenagers use Kazakh language less often and other two participants: student2 (Kazakh-medium grade) and parent2 do not support their opinion. In addition, student2 said that “Teenagers often use Kazakh language and I can observe it in everyday life.” (2015) However, majority of participants have another point of view. For instance, student1 said that “Overall, teenagers do not often use Kazakh language including me” (2015) and parent1 states “I think, teenagers do not use Kazakh language in daily life, and this depends on the environment, region and a lot of other factors.” (2015) Parent1 also said “I assume that teenagers in Southern Kazakhstan areas and West Kazakhstan areas, in particular, in Atyrau and Mangystau, often use Kazakh language” (2015), and on the other hand “although, the teenagers living in Uralsk and in Northern regions of the country do not use Kazakh language so often, because of a lot of mostly Russian-speaking people.” (2015) Moreover, this point of view of my participant supports the fact that was written above, Russian language dominates in some regions due to outnumber of the other nations than Kazakhs.
For the second research question student1 answered “My attitude to Kazakh language changed by the time” (2015). This participant used to speak Kazakh, when she was younger, but becoming a teenager she uses it just during the lessons.

In contrast, student2 did not change her attitude to language. “No, my attitude has not changed; I knew it since childhood.” (2015) Taking into account that student1 is from Russian-medium class, in the school he depends on his classmates that speak Russian. So, to support their children, at least, parents should use Kazakh language in everyday communication and set the example for them. I suppose if parents use Kazakh language in upbringing from early age and later, children will not have a language problem in the future.

“What is the value of Kazakh language nowadays?” is a really essential question. My participants gave me four same and one different answer. Student1 and student2 have the same answers for this question; Student1 said “Currently Kazakh language in Kazakhstan does not have as high status as we wish it has, but in the future it will change.” (2015) I support these opinions, because currently we have a problem with Kazakh language use, but we search for the solution to this problem, which means that we are rising authority of our mother tongue. And expert’s answer confirms my words:

I consider that Kazakh language is used even more often day after day, and we can notice it in everyday life, for example, on TV and at school. Therefore, in comparison with the past authority of the Kazakh language now it is at more or less high level. (2015)

Two participants of my interviews were parents. Due to them I could acquire more information about value and authority of Kazakh language in their teenage years. It helped me to compare results. However, two parents were in different situations in their teenage years, and I have absolutely different information. Parent1 said “When we were students, Kazakh language did not have such significance as now. All of us used Russian language and studied in Russian” (2015) However, parent2 said “In my teenage years such problem didn’t exist, and all of us talked in Kazakh language.” (2015) Moreover, parent2 is the only person, whose opinion is different from the other participants’ opinions, “I think status of our language is not so high nowadays, because a lot of people speak Russian, and forget Kazakh language.” (2015) I look at this in both ways, on one hand day by day Kazakh language becomes more valuable, on the other hand, a big proportion of Kazakh teenagers is still using Russian for communication.

My research work is based on Kazakh language problems, I have found reasons of this problem, so in the end, I would like to present possible solutions of this problem based on my participants’ opinions. The fourth research question is how we can protect Kazakh language. I had interviewed five people and each of them has his own suggestion. Student1 says “In order to promote Kazakh language it is necessary to conduct special courses.” (2015) I think it is not the best solution of this problem, because not all people can afford special language courses. Moreover, this participant said; “I use Kazakh language more often at school than at home” (2015). I suppose that solution depends on parents too, and parents, as adults must join to decide this problem. Moreover, expert noticed that parents have the greatest effect on teenagers and on this problem in general.

The second student said “I think it depends on TV stars, if they use Kazakh language correctly, they will set us an example” (2015). I agree with the participant, because promotion is a really good way to solve this problem, and celebrities will be a good example for teenagers.

“If the language policy which now is introduced continues, importance and authority of language will increase in the future.” (2015), said parent1. Considering the fact that our country has a good strategy, we can suggest that some years later this problem may disappear.

In my opinion, all solutions which were suggested by my participants could be used. After interviews I was able to find answers to all of my research questions, and I can look at my work from different perspective.

Conclusion

I will summarize this research paper through analysis of the relation of the research outcomes
to my research purpose and research questions. My purpose was to explore problems with Kazakh language spread and use among teenagers in Kazakhstan. According to the results of research work, I considered that I have attained the aim and came to the conclusion. According to sources, the problem of Kazakh language exists and there are ways to solve this problem, but during my research, I revealed that not everyone is aware about the program, which helps to learn Kazakh language and are motivated enough to speak Kazakh. At the same time, I knew that attitudes of teenagers toward Kazakh language in many cases depend on surrounding environment. Consequences of language problem can be of enormous scale; therefore, decision of this problem is very important for the culture of Kazakh people. Responding to research questions, various solutions were offered by participants of interviews. Based on various solutions, I recommend for state officials to use some of them in near future. In my research paper I was able to show the opinion of students and citizens. This research paper expands knowledge on this topic, and it means that my work can be a good resource for the following research.

References

Factors Determined the Attitude of “Molla Nasraddin” Magazine to the Classical Heritage

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**Abstract.** The article is concerned the mission of the satirical magazine “Molla Nasraddin” which was published firstly in 1906 in Tbilisi, Georgia, which was the cultural center of the Turkish speaking people that time. The problem of reality and literature were given on the pages of the magazine with the satirical laughter. The literary school of Jalil Mammadguluzadeh based on the folk and classical literature.

**Keywords:** Molla Nasraddin, factors, literary movement, literary school, laugh, style, satire.

“Molla Nasraddin” was the first humor magazine in Azerbaijan which played an important role in the emergence of the pioneers of the cartoon art of humor, literature; the name of the magazine was taken from the repartees about a well-known comic character Molla Nasraddin (Nasraddin Hodja, Teacher Nasraddin). That is why it is one of the main factors to study the attitude of the classical heritage of this journal.

“Molla Nasraddin” magazine was fed and based directly on the classical heritage. In studies of the articles published in “Molla Nasraddin” magazine according to their genre, style, and other aspects, the new feature and quality of classical literary heritage as well as their great meaning become clear. Sometimes when some literary event happens in the life of the society, or simply some social event only occurs, its connection to the events of the past is so insignificant. However, “Molla Nasraddin” magazine put it in another manner which prevents a person’s life; it seemed to be getting rid of the things that oppressed the load which was used to help to create things. The life of the Muslims was not based on some real values, it was based on illusions. Despite of their hard real life, they did not wake up from this life, and classical literature helped them to remain there, to continue their hard life. That is why “Molla Nasraddin” magazine applied to the classical literature and parodied its materials. So, in order to study all of these issues it is very important to research the relation between the classical heritage and “Molla Nasraddin” magazine. Studying of the social life in details during the period of activity of J Mammadguluzadeh should be one of the important targets of this research. Let us review the preface written by Aziz Mirahmadov to the works of J Mammadguluzadeh published in 1966 in the 3rd volume. Author made a short insight and gave a summary of Jalil’s activity and wrote the following: “the realism of J Mammadguluzadeh raised Azerbaijan
critical realism to a completely new level, gave it a strong satirical direction; he (J Mammadguluzadeh) established a complete and comprehensive literary school covering all genres and bright side of life. Large mindedness, national character, infinite devotion to the people and progressive ideas which interfered with the development of the society withdrawing moral rots and committing all kinds of people who were miserable and shameful oppressed through the injustice and hypocrisy; the uncompromising bright, rich, meaningful hate of this school was one of the most important and efficient basic features of his realism”. This complete summary given by Azez Mirahmedov reflects the idea of the literary school of Mirza Jalil. Based upon this part we can judge that some fundamental incidents happened during Mirza Jalil’s and “Molla Nasraddin” activity.

The paradigm of the literary meditation had changed; there was a great need in the literary reflection of the life and reality, i.e. the literature and literary meditation required to be renewed and to have more new content and forms. It was the demand of the day. Later the author mentioned the following: “there was one nice feature which made him (Mirza Jalil) differ from the other critical realists of the 19th century. Pathos of the realism of J Mammadguluzadeh focused on the destroying of negative ideas, defense of the positive ones and creating of a new life. The activity of Jalil Mammadguluzadeh was innovative but it was enlightened at the same time with completely classical beauty. The comprehensive, meaningful, and compact shape and the laconic plot of his works stood side by side with the most beautiful composition of the classic examples of literature and gave a high aesthetic pleasure to their readers”. The academician Aziz Mirahmadov mentioned that “it was a point of the long-standing contact between the Islamic and Christian worlds, as well as the collision square of the interests of different social, political, intellectual and philosophical currents”. The beautiful country Nakhchivan bordered on the southern part the Soviet Azerbaijan, on the other side it bordered Turkey and Iran, and on the third side it bordered Armenia. Its citizens watched a living history of political events taking place in the life of these three countries, and as close neighbors sometimes they had to defense and protect their own identity, beliefs, moral, social and philosophical views and traditions from the external influences. All these factors including the geographical one played an important role in their history, life, customs and traditions. The community of writers and social conditions is not included in the factors which shape them among all the circumstances; i.e. these factors do not influence on the formation of the outlook of a writer or an artist. But as for writers, it would be appropriate to say that the formation of writers includes the community during their childhood and teenager years; as for Mirza Jalil, the community among
which he grew up forced him to write the tragedy of his people and to be a writer.

We should mention one fact. Our literature especially the fiction literature is a social phenomenon; and of course J Mammadguluzadeh together with MF Akhundov was one of its originators. We do not dedicate this work only to the artistic heritage of Mirza Jalil, also to Molla Nasraddin magazine, because it was a literary school and it affected the prospects of the Azerbaijan literature deeply.

Isa Habibbayli confirms: “Molla Nasraddin” was a great serve and contribution of J Mamedguluzadeh in the establishment of the literary school. The literature representatives gathered around the magazine “Molla Nasraddin” thanks to the efforts and the work on its organization. The literary generation of the contemporaries of Mirza Jalil was specifically known and earned a great reputation”.

The academician mentioned the formation of the literary generation of “Molla Nasraddin” but this issue wasn’t studied as a separate problem previously. Habibbayli wrote: “the materials of “Molla Nasraddin” magazine, as well as the letters and memories of J Mammadguluzadeh, and the archival documents give us an opportunity to study and generalize the results”.

First of all, we need to research one theory fact that “Molla Nasraddin” (we think we may use “Molla Nasraddin” as the term defining the literary school) was not only a literary school or a literary front, but it was also a literary trend. This “front” had a literary essential. The literary generation led by J Mammadguluzadeh gave the impetus to a successful development of the movement.

Over 60 years the new forms and ideas of the Azerbaijani literature and in particular prose coordinated with the literary perspectives. We need some theoretical generalizations to explain this issue. The conduct was required. It should be noted that the creation of a literary movement, the appearance of a literary trend was associated with the different poetic thoughts.

After MF Akhundov a new type of social literature was updated and turned after all into a literary school led by J Mammadguluzadeh. If Akhundov defended and expressed the aesthetic and other principles of the Azerbaijani literature by himself, then Miza Jalil enriched those principles and ideas, and formed a literary generation which supported them. If we talk of the pure literary movement, we should show its aesthetic principles. No doubt, the establishment of the new literature stimulated the creation of a new style or styles. According to Isa Habibbeyle, the observations showed that the people who worked on “Molla Nasraddin” magazine played then an important role in the social life. Having resolved to publish his journal, Mirza Jalil got to know all of the staff members’ abilities, skills and talents, i.e. when J Mammadguluzadeh started to publish “Molla Nasraddin” magazine, he invited the representatives of the literary community from Erevan and Nakhchivan and some known writers from the seminary of Gori and hoped to establish a common literary and aesthetic trend.

People with whom he communicated particular in the newspaper “The Russian East” were the representatives of the same literary community and shared his outlook.

In one of the studies we can read the following: “one of the characteristics of the literary and artistic movements is the lack of the chronological order”, i.e. any literary trend performs some aesthetic duty for some time; it results in the other completely different artistic trends.

If we follow the history of the world literature, one of the first movements such as dolce style nuovo can be a good example. It is a literary direction of the late 12th and early 13th century with a common platform which gathered such poets as Guido Cavalcanti, Dante Alighieri, Dino Frescobaldi, Cino da Pistoia, Gianni Alfani, and Lapo Gianni.

We can make the other examples such as Ronson of the 16th century, poems by Baïf, Bello, Jodelle, du Bellay and other poems which were written by German Romantic poets from the 17th to the 19th centuries. The poems by Zola and Goncourt brothers can also be considered as good examples, as well as works by Maupassant and Daudet as the representatives of French naturalism, works by Marinetti, Paolo, Corrado Govoni, Folgore as the representatives of Italian futurism of the early 20th century, poems of the representatives of Russian symbolism of the early 20th century and so on.

As you can see there are the differences and similarity between these facts, and it is quite normal. The meaning (the essence) of the problem in
the European samples (European literature) is connected with the aesthetic demands. For example, Mirza Jalil (even MF Akhundov) belongs to the aesthetic and social content. The difference is in the development of the regularity of national literature, and it should be taken into account. This conventional style does not except the identity of every master. The names of the masters involved in a literary unity play a key role in the fate of its further development. The materials of “Molla Nasraddin” magazine should be studied from the viewpoint of the classical literature.

References

Arts
Some important changes occurred in life of the society of Uzbekistan along with the gaining of Independence. These changes are directed to the advancement of the state on a new way, to the development and strengthening of the national idea, based on the wide usage of historic values and public heritage. It is necessary to emphasize that nowadays multifold possibilities were created in the life of our society for the solution of important changes, since the architecture of the Republic of Uzbekistan rises on a competitive level.

According to the President of the Republic of Uzbekistan Karimov IA, the primary focus of our government was always and will be in future on the development of the social sphere, providing of workplaces for the population, housing development and improvement of settlements, as well as the further reformation and improvement of the educational process and public health¹.

The Republic of Uzbekistan gained its worthy place and degree within the international cooperation, established the efficient and full-fledged cultural relationship with the all states of the world, and its architecture develops in a new way. The gradual transformation of cities and villages, as well as the development of new industries prove this fact to the full extent. In a short period of time the landscape architecture was revived in a new direction, a number of new structures and architectural complexes were created.

In the course of the years of independence of the Republic of Uzbekistan within the town planning the landscape design came into use, a number of new memorial complex were reconstructed and built, absolutely new examples of the harmonization of artistic means appeared. The departure from the monotony construction, which was inherited from the epoch of the industrial construction, revealed the questions of reconstruction of local and regional artistic devices, as well as the intensifying of the emotional importance of the architecture. This is caused to a certain extent by the pathos of the characteristic of a new time of each period of the rebirth to the independence of the new artistic style. The architecture of the post-Soviet space yielded to searching for means of the regional architecture. It is possible to see on example of the neighboring countries too.

Searching for a unique architecture of the new time was accompanied with the increasing interest to the rebirth of some architectural traditions: portal, dome, pillars, ornament, and other artistic means and forms. Since the basic traditional forms have not got any transformation from 1920 to 1990, there is a necessity to fill this gap with the theoretical basis. In this connection the traditional pillars, domes, portals of concrete, stone, metal, plastic and other modern building and composite

¹ Karimov IA. The year of 2014 will become the year of the development of the high rate of our country, of the mobilization of all possibilities, of the consequent continuation of the reputable strategies of the reforms. Tashkent: Uzbekiston; 2014. p. 60.
material appeared. It is possible to observe that the last ones are often used in the form of triumphal arches. Worked out during century methods of the transition from complex dome systems to more simple ones give way to the ferroconcrete domes on a flat base. The occurrent substitution of wall painting with banners and other modern technologies determines the searching for scientific and methodological base of the introduction in the architecture and town planning of new artistic methods. The development of the advertisement and billboard technologies results in the spreading of previously unknown minor forms and elements which at times have an influence upon the artistic quality of the architecture and urban layout.

The analysis of the historical experience shows that in the past a great importance attached to the usage of artistic-expressive means which could reflect the ideology of the society, conveyed the idea of the epoch, and which were directed to the strengthening of the state system. This fact is possible to see in the context of the history of the architecture. So, the pyramids of Ancient Egypt, its grandiose temples, rides of sphinxes, front gate pylons decorated with hieroglyphs left an indelible impression and intensified the ideological influence of the buildings on visitors. The sculptural and other artistic means of Ancient Greece and Rome promoted also introduction an ideological attitudes of the state system. It was typical for Ancient China, India, and Central Asia as well as for the other countries.

In the ancient world, as well as in epoch of the medieval period, the architecture expressed the power of the state and its ruler. In this context a special place takes the emotional influence of the synthesis of fine and artistic means in the architecture. Here it should be reminded the inscription made by Amir Temur on the portal of the Aksaray Palace: “If you want to see our might, look at our buildings!” Numerous wall paintings in palaces which represented the military campaigns, as well as the passages from the text of the Quran on the internal and external walls of the mosques, madrassas and dervish lodges were instrumental of the strengthening of the Islamic religion.

The portraits and sculptures of gods, priests, cordon bleus of different countries, slogans and panels of the authoritarian period were also directed on the introducing of the state ideologies. Some famous master-architects defined their uncontented positions concerning the artistic image of the buildings built by imitating of foreign copies, which are not ideological, but sometimes meaningless and foreign: “...perhaps today we must put much more individuality and human origin in this architectural-building conveyor. In this context I would like to say about the problem of the synthesis of art in our architecture. How empty would be the society, if the sculptures,
reliefs, temples, frescoes, and paintings of Egypt, India, Indonesia and other countries disappeared from the architecture of the world. We impoverish our architecture with our excessive “modesty”, justifying in this matter themselves and customer out of concerns for the savings, and not thinking of the future.”

The expression of the greatness, power and style of life through the demonstrative means in the architecture and town planning goes back to the antiquity. This fact confirms their role as one of the most powerful mean of propaganda of the ideologies of the existing state system. Nowadays there is a necessity of studying of methods of the ideological importance increasing within the synthesis of fine and artistic means, a necessity of using of demonstrative means for agitation and propaganda, a necessity of searching the ways of their realization in the architecture and town planning. Such requirements were the main base for the adoption of the advertising law. The 3rd section of this law states the following: “The advertisers and producers of the advertisement must comply with the principles which are not contradictory with the world standard and national traditions.”

A movement directed to the rebirth of local and historical values, to the development of the spiritual base of mastering the legacy of the ancestors, as well as to the creation of monuments, objects worth seeing, memorial complexes and squares devoted to the process of the apperception of the Uzbeks arose during the years of independence. The prospects of its development require the in-depth scientific analysis. Thus, the scientists face an actual question concerning the determination of the factors of formation and development of the architecture. “The rebirth of the spiritual values means also their adaptation to the values of the modern world and informational civilization”.

In contexts of independence the architecture of Uzbekistan works out anew, creating new forms which are typical for it. During the last years the combinations of traditional and new fine-artistic methods are broadly used. In particular, goes the process of the shaping unique architectural-artistic symboology. The brilliant example of the formation of the original symbolism of the Independent capital is Tashkent city. Thus, on the Independence Square (Mustaqqillik Maydoni) there are such new artistic symbols as the Arch of kind and noble aspirations with the images of a heron and a crane on its top, the monument of Happy motherhood as a triumph of peacefulness and benevolence, which propagates the ideas of confederation and strengthening of peace. So, entering the Republic Uzbekistan sideways of Republic of Kazakhstan and the other countries you can see the architectural-artistic elements, buildings, which give the primary insight into this state, its culture, history and others. The identification buildings were built at the regional borders, near the entrances into different residential points of the Republic of Uzbekistan; some of them are done amateur, it is observed due to the discrepancy of the presentative approaches. All these facts tell us about the formation of new methods in the usage of fine-artistic means in the architecture, pointing to its actual necessity of a special scientific analysis.

Practice of the using of such artistic means faces the modern architecture the questions of study of identification.

Thereby, the question of requirement of the scientific analysis, as well as the issues of the harmonization of the monumental art and artistic means becomes the actual problem of the modern architecture. The author sheds light on the base of the harmonization of fine arts and artistic means in the architecture of the Independent Uzbekistan.

The concepts of the “old city” and “new city” appeared as a result of foundation and strengthening of separate territories of people with absolutely different political and economic purposes, and in particular with the other ideology and other view of life. An organic synthesis of architecture and fine arts, as well as of a specific relationship of streets which are various spatially, depends first and foremost on the following:

1. convenience of streets for the observance of art works within the system of architectural ensembles and direction of motion from the viewpoint of the organization of the ambience within the tasks of the town planning;

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3 Karimov I.A. Uzbekistan on the threshold of the 21st
2. synthesis of the monumental art and architecture within the exterior of buildings;
3. correlations of streets at the level of the architectural interior.

Herewith, new buildings must be harmonized with the existed town elements. The principles of town planning require an artistic conceptualization of the integral inhabitable environment, because the overall purpose of all the renovations consists in the civilizing of the environment. The first condition of the creation of the vital surrounding is the complexity of the town planning within the shortest possible time.

The original reform and the model of modernization accepted in Uzbekistan set a task to the architects to fulfill the reform within the transition period from the administrative-command system to the market. One of the “evolutional” approaches consisted in the following: you must not wreck the old building until you build a new one. It means a consequent and staged fulfillment of the state reforms. The specific of the architecture consists in the combining both technology and art, and therefore:
4. The design work is executed on the base of the engineering knowledges;
5. Architects within their creative processes, applying mostly some geometrical patterns, create the images through the artistic intentions and emotional sensuality.

The ideological contents of the project of a building, its artistic and figural image, as well as the painting and sculpture help to apply some types of monumental art alongside with the architecture, and together they provide the “synthesis of arts”. But it doesn’t mean that the modern architecture should refuse from the progressive national artistic traditions. The most fruitful way of creation of an architectural product consists in the common work of architects with artists and craftsmen. In this context the synthesis of art for the purpose of creation of a multifaceted artistic image combines the different genres of fine arts. The applying of national ornaments and picturesque decorations give to the architectural forms a modern architectural image.

The architectural works of the period before the Independence created under the motto “national in form”; in sober fact they were in form and in content rather international, than national, thus, they were faceless. Mostly for the purpose of shaping of the individuality to a building the specialists in town planning use some traditional architectural forms and decorative components. However, due to the noncompliance with form the decoration of buildings become complicated and excessive. This has a detrimental effect when it is referred to a simple building from the architectural viewpoint.

The main purpose of the theory in the architecture consists in the social forecast; therefore it is very important not to separate the theory from the complex problems of the practice. The integrity of an architectural composition or its conformity with the laws of harmony exists not only within the town planning, but also in the architecture, applied art, painting and sculpture as well. The most important public buildings and structures of many cities of the Republic are decorated with mosaics, wall paintings, relief, stained-glass windows and panels, or tapestries.

Architecture can be considered as a combat of an architect and an artist, and the artist is here a subordinated person. The building can be “brighten”, i.e. to give an emotional and didactic meaning to a dull plane of the wall.

Creating the relationship between a man and a city environment, the architecture performs the main function of such complicated social organism as the city. Nowadays the fine and artistic means of the architecture are divided upon their purposes into the local and city-wide ones. The following factors must be taken into consideration to organize them:

- striving to the constancy and renovation, i.e. the architectural and town planning system in any

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type and in any degree will be always connected with its own elements as a united system, where the hierarchical position makes the following succession from the methodological viewpoint:

- location of the symbolic and historic gates;
- location of fine arts means of agitation and propaganda;
- harmonization of the fine arts (wall painting) and artistic (architectural decoration ornaments in the exterior of buildings) means in the architecture;
- fine and artistic means in the interior of buildings;
- sculptures (monuments) and memorial complexes in the town planning;
- the decorative-applied arts, minor architectural forms, program of the color decisions within the organization of the environment;

The synthesis of architecture and types of the fine art in the town planning is used as a priceless methodological base, and is related to the social life, uneven development of art and the problem of the proportion of the space. The following means are recommended by the author to use for the purpose of achievement of the originality in the architecture and town planning:

1. Usage of the original historical elements of the town architecture to achieve the synthesis;
2. Stylization of the traditional forms and the emphasis on the regional and local traditions;
3. Harmonization of not only national, but also modern international features within the urban environment (concerning the design of megacities);
4. Achievement of the expressiveness of architectural objects through the monumentalism.

The creation of a unique inimitable architectural, artistic, monumental, and decorative image of the architecture requires the constant synthesis of arts.

CONCLUSIONS: The results of the generalization of the scientific analysis of this area of focus showed that history of using of fine and artistic means went back to the remote past. Fine and artistic means developed in the inextricable connection with the architecture displaying the ideology of time and intensifying the emotional influence of the architecture. Such grandiose buildings confirming the self-statement of ideas as the ancient pyramids, sanctuaries, high-altitude towers etc. were built up for these purposes.

The same examples can be observed also amongst the ancient architecture of Central Asia. So in the medieval period the stylized architectural forms, complete facade finishing of the public buildings with the calligraphic ornament on the base of texts from the Quran and the Hadith appeared. All these facts point that the usage of the artistic and fine means in the architecture and town planning has wide possibilities for the strengthening of the social and political standpoint of the state.

It is particularly important under the condition of independence, when the modern architecture and town planning of the Republic of Uzbekistan develops with wide use of the landscape design, monumental art, traditional, new, and minor architectural forms, as well as the fine and visual means. The analysis of the stored material concerning the architectural and town planning practice, architectural designing and scientific research results allowed within the framework of this research to do the following findings and offers:

1. The usage of the fine arts and artistic means in the architecture goes back to the ancient time — to the first paintings on the caves of the paleolith. The similarity of images of riders on the wall fragment found in Orlat burial mound, the miniatures in medieval books, wall painting of Afrasiyab show that the continuity of traditions is observed in the art of the monumental painting of Uzbekistan;
2. Fine and artistic means developed in the inextricable connection with the architecture displaying the ideology of time and intensifying the emotional influence of the architecture. Such grandiose buildings confirming the self-statement of ideas as the ancient pyramids, sanctuaries, high-altitude towers etc. were built up for these purposes. The same examples can be observed also amongst the ancient architecture of Central Asia. The famous painting of the town Afrasiab of the 7th century were used as the additional means of the fine arts, which reflected the ideological policy.
3. In the medieval period the stylized architectural forms, complete facade finishing of the public buildings with the calligraphic ornament on the base of texts from the Quran and the Hadith appeared. All these facts point that the usage of the artistic and fine means within the architecture
and town planning has wide possibilities for the strengthening of the social and political standpoint of the state.

4. During the years of independence the modern architecture and town planning of the Republic of Uzbekistan develops with wide use of the landscape design, monumental art, traditional, new, and minor architectural forms, as well as the fine and visual means of propaganda.

5. The association of methods of the synthesis (the signs on entrance to different territories of the country, cities and other localities, elements of the landscape design, traditional, new and minor architectural forms of fine arts and artistic means) which are applicable in the modern architecture and town planning of Uzbekistan under the general name “Usage of artistic and fine means” allowed to research their nature and develop scientifically-methodological base for their further improvement.

6. The synthesis of monumental painting and decorative-applied arts was wide used for the purpose of ideological propaganda within each society. All these forms became the standard of the usage of fine-artistic means in the architecture. They formed the main criterion of usage of fine arts and artistic means in the architecture.

7. In the ancient times the wall painting and sculpture were used for the purpose of the reinforcement of the conceptual and artistic power of the architecture. From the 9th century the decorating and monumentalization of the shapes of portals, minarets, pillars, and dome developed. In the medieval period alongside with the afore-mentioned means the calligraphic ornament and the other fine means propagandizing the state ideology get their development;

8. The scale of the pictures of the wall painting was related to the size of a person and the room. The painting was executed at scale one-to-one or two-to-one according the distance of the observing point, surfaces wall and its height.

9. Usage of the strip ornament of friscia allowed gaining the intercoupling and interpenetration of wall painting with the architectural elements of the interior;

10. It is recommended to use the traditional forms and symbols of independence skillfully, creating new means of agitation of the architectural ideas of modern Uzbekistan. As a methodical base the following objects are recommended: Independence Square in Tashkent, the architectural and artistic memorial complexes: Alpamys in Termiz, Jalal ad-Din Mingburnu in Urgench, Al-Farghani in Quva, “Old and eternal Bukhara” in Bukhara and other buildings. The examples of the synthesis of fine and artistic means used in the construction of these buildings can be the standard of measure.

11. The excessive ideologization of the architecture and enthusiasm concerning the artistry of the at the turn of the 21st century resulted in the stylization of the architectural elements (creation of grandiose portals, fully ornamented facades, building of timely unfunded applicable minarets and domes etc.).

12. The development of new technologies of the visual means lead to the use of the technology of banners and billboards.

13. The ancient tradition of the building of portals resulted in the interest to the construction of symbolic gates.

14. For the purpose of the achievement of the aesthetic unity of the synthesized means, the introduction to the subject of the main applicable symbols according to the following hierarchical system is recommended:

- the installation of symbols of the national nature in the capital and regional centers;
- the installation of means of the agitation and propaganda within the cities;
- the general symbols are recommended to use in the center of the city, residential districts, mahallahs; the means of propaganda and advertising should be installed on the squares and building of the local nature;

15. The compliance to the normative requirements and rates (the form, contents, scale) when using the fine and artistic means in the architecture was defined;

16. Within the interiors of public buildings it is recommended to use artistic panels, posters and billboards devoted to the architectural and natural monuments, as well as the modern architecture of Uzbekistan;

17. There is a necessity of scheduling of a complex plan of the architectural and artistic design
of cities including its reconciliation with the general designer of the city. When making the complex plan, the thematic content of the main streets, squares, and territories of the city must be developed first and foremost;

18. It is reasonable to unite with one general idea, the synthesis of fine and artistic means in the architecture from the entrance in a city to each area of buildings complex, their facades and interiors;

19. It is necessary to create some special rates and rules of the town planning and architecture concerning the usage of fine and artistic means in the architecture and town planning;

20. When using the traditional forms in the architecture (domes, portals, chartaks, arches, pillars etc.), one should take into account their tectonic structure. If these elements are used as decorative forms, it must be expressed constructively and figuratively;

21. There is a necessity to systematize the scientific, practical and methodical recommendations on the usage of fine and artistic means from the viewpoint of the choice of their form, scale, color and other means of composition;

22. For the purpose of wider propaganda of ideas of the independence it is recommended to use the methods of the harmonization of fine and artistic means in the architecture.

23. On the base of the scientific literature, history and experience the modern analysis proved that the synthesis of fine and artistic means in the architecture as an intensifying power of its emotional importance is also recommended to use at the time of the independence of Uzbekistan.
Harmonization of the Artistic Means in the Architectural Buildings Devoted to Astronautics in the Modern Architecture of Uzbekistan

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The history of the cosmic flights of the mankind began on the 12th of April, 1961, when the spacecraft “Vostok” with Yuri Gagarin abroad was launched. We think that this spacecraft was named “Vostok” not in vain. And it is also very pleasant that our scientists and specialists are participial to the Astronautics. So, our countryman Vladimir Dzhanibekov flew into space in 1978, 1981, 1984, 1985, but in 1988 the spaceman Solidzhon Sharipov flew on the spacecraft «Indevor» (USA) (3, p.262). In this connection the research process had also a positive effect on the the development of the architecture and art.

The architectural structures which were built in the 1960s in Russia have a dinamic nature, they look skyward. For example, within the ensemble of the Ostankino TV center in Moscow the monument to the Conquerors of space was inserted in 1964; and its sweepy arc, marking the main entry to VDNKh, correlate well with the vertical line of Ostankino tower. Ostankino tower as well as Tashkent TV tower symbolizes the achievements of its time, the time of the heroic conquest of space, which foundation was layed by the soviet science and technology (1, p. 258). In 1967 the State museum named after KE Tsiolkovskiy was founded in his native town Kaluga (the building was designed by architects Barhin B, Kireev E, Orlova N, and sculptor A Faydysh). Here it is possible to get acquainted with the prehistory of the study of space and the first steps of its exploration. The small building of the museum proudly rises over the high slope near the park with the grave of Tsiolkovsky. From thence a picturesque view opens up on the river-valley of Yachenka, as well as on the vast woods and fields of Kaluga. The romantic image of the museum is composed from a two-storeyed volume, cut through a paraboloid of rotation, which acts as a small planetarium. It looks as if a skyward rocket blasts off in this amazing small piece of nature. Knowing that the great scientist lived, worked, and reflected here on the problem of the exploration of space, intensifies the memorial importance of the building. Its interiors with mosaic panel pictures as well as the exhibits, amongst which the first spacecrafts are especially notable, are very expressional. Such planetarium and observatories are built in many cities, for example, in Moscow, Armenia, Crimea, as well as in Samarkand. The Astronautics and the Astronomy are interconnected. In the building of
Planetarium in Moscow (designed by M Barsch, M Sinyavskiy, 1927-1929) the towerring over the round hall thin-walled dome has a beautiful helm-shaped contour from outside. The figurable shape of the dome resonates also with the details, such as the spiral stair with its bright contrast between the massive architectural and artistic top and the transparent bottom.

On the 26th of March 2006, on the day of the ordinary eclipse, the telescope of the famous company «Grabb Parsons» was started at the University of Samarkand. This observatory is located on the grief Maydanak near Samarkand. A new epoch began in the history of Samarkand State University this day; it became the first higher school with its own astronomical observatory not only in Uzbekistan, but also in the whole Central Asia. And the year of 2009 was declared as the international year of Astronomy. Our researchers discovered 7 new stars; two of them were named «Samarkand» and «Maydanak». It is possible also to note particularly the originality of the architectural concept of the station «Kosmonavtlar» of Tashkent metropolitan railway and the monument devoted to the spacemen which is located near the entry to the station.

In conclusion it is possible to say that nearly all types of fine and artistic means were applying in order to traverse the subject of Astronautics (the above- and underground architecture, monumental sculpture, hardscapes, mosaic, embossing, sgraffito, monumental and easel painting, poster etc.).

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Artistic Means of Agitation and Propaganda in Urban and Architectural Space of Modern Uzbekistan

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Abstract. The article presents the analytical and theoretical basis of problems concerning the usage of agitational, advertising and expressive means within the urban space. There are some problems concerning the outdoor advertising of our modern republic which must be solved.

Nowadays the outdoor advertising as a specific type of the creative activity becomes an integral part of the urban landscape. Every time leaving home you face with colorful posters, shocking or amazing images on billboards, aside from standard signboard. The expressive means of the advertisement are different from the other means of agitation and propaganda of the mass-media through a row of features:

- it is met by the greater part of the population in our modern mobile world;
- it is very well-marked and has a great influence on consumers due to its size;
- the billboards are installed for long time and this fact gives an opportunity to consumers to remember the image better;
- being illuminated in the evening and at night the advertising acts has an effect on the consumers twenty-four seven.

Nevertheless such an advertisement could be used effectively only for those goods and services, which could be presented by means of a laconic image and short text; otherwise the advertisement will be less efficient and won’t have a deep influence on its consumers. It is necessary to take into account that the exposure with any visual advertisement is quite brief and unforced, so the intensity of the exposure of the trademark with the consumers is not so great. It is assumed that a person looks at a billboard for about 10 seconds at an average.

Nowadays the expressive means of agitation and propaganda fill the central streets and squares of our city, and the ad creators face to the problem that it becomes more and more difficult to create such an advertisement which could execute its main function, that is to draw the attention. It becomes more and more difficult to stand out among the plenty of other bright advertisements. The presentation of the creative elements of the announcements is here of great importance.

The advertisement itself refers to the graphic arts, but the billboards are created by designers. Creating their product, they can demonstrate their own ideas, surprising and enrapturing the consumers...
with their own creative flush. The designers need to come up with an image and small slogan, which could be seen from a moving transport from 150 metres, and which would be original and convince the consumer of the necessity of the purchase.

Just from the creative point of view the outdoor advertisement can be considered as one of the most interesting types of the advertisement. It combines the commercial activity with the creative one. The materials and colours used in creating of the outdoor advertisement as well as its size allow the artists to demonstrate their talents at all capacity.

According to medicine the perception of the text of the outdoor advertisement is limited by its headline, the rest of the text is mostly not read. Thus the coloring, being one of the dignities of the advertisement, plays a considerable role. It is necessary to use contrasting and bright colours (red, green, etc) in order to make the billboard observable.

The used fonts must be simple and readable. There are some necessary rules:
- the amount of letters must be minimized;
- the kerning as well the spacing between words must be moderate;
- the letters must not be too bold or too thin;
- the composition must be expressive from the artistic viewpoint.

If you need your advertisement to be distinguished, original and rememberable, it must be blend into the urban space.

The modern technical possibilities allow to create the advertisement of practically any form. The rooftop constructions are one of the most expensive and prestigious types of the outdoor advertisement. From the technical viewpoint they can be divided into two classes on the base of the illumination type: the frontlight (the sign is illuminated by some spotlights from outside, this type of lightning is rather cheap) and the backlight (the sign is illuminated from the inside by luminous tubes or metal halide spotlights).

Since the main condition of the perception of an advertisement from the medical viewpoint consists in its visibility, it is necessary to choose the most advantageous place for the installation of a billboard or something. The advertising panels are situated as a rule along the streets and roads of the city, on front and gable facades, as well as on roofs of the buildings. The throughways, turning, bridges and other places of the heavy traffic are not very efficient for the installation of the advertisement, since the drivers are concentrated mostly on the road.

Previously the installation of the advertisement was forbidden along the roads, but nowadays the Advertising law allow the installation of advertising boards on the waysides of the autoroads. Although there are many contradictions which are difficult to solve.

The text and images on the advertising media require a certain control, since they play a decisive role in drawing of attention of the consumers and road users. It is also necessary to take into account the existing external space while installing an advertising board, especially in respect to colorful billboards.

One of the paradoxes of the modern outdoor advertisement is a requirement of its combining ability with the surrounding space and at the same time the necessity of its showiness. If you install an ultra modern signboard (for example, the running letters) amongst the buildings of the old city, it will be not in order. This advertisement will break the existing harmony, which was formed long ago; thus both the advertisement, and the architectural space won't look enough attractive. The combination of modern billboards with some known brand names on the walls of old buildings creates an inefficient image.

From this it follows that it would be appropriate to highlight the main requirements to the advertisement:

1. Wholeness. The poster must have a holistic image, exercise a holistic influence in a body. The whole poster does not work if it contains a brilliant slogan and a bad image;
2. Variability. The advertisement is designed for the certain conditions: place, time, goal. One and the same advertisement can not work in different cities or seasons.
3. Reality. The Market offers the real goods and services, so the images used in the advertisement must be real too. The advertisement must use such words, which can’t be perceived equivocal. The creators must use the photos instead of drawing, because it is also recognized as a documentary proof of the validity of the advertised object;
4. Modernity and terseness. The poster must contain a limited number of components. Unfortunately, some modern advertising messages look exactly like a visual noise because of the plenty of details.

5. Adaptedness to the national mentality. The images of the advertisement must be corresponded to the local, ethnic specifics in order to be close and comprehensible, thus they must have credibility and mustn’t irritate. The popular in the foreign advertisement erotic patterns can cause the resentment in our country;

6. Emotionality and imagery. The emotionally coloured information is remembered better, because it involves the associative memory and will.

7. Reflection of the main value orientations of a person and regularity, as well as the address directionality. As it is human to forget, the advertisement must be unceasing and wavy.

All these above-mentioned requirements are necessary to take into account while creating an advertising slogan. It is of especial necessity to take into account the local mentality and language of the advertisement, at least 70% of advertisement must be in the state language, i.e. in Uzbek.

In connection with the above matter we can conclude the following:

- the outdoor advertisement must be simple. The right choice of a well-directed message and simplicity of the advertisement are of great necessity;
- besides the problem of perception of the outdoor advertisement from the medical viewpoint, there is a problem of finding of a determined place which the advertisement could take within the surrounding world. It consists in finding of something «local», which could be used in the advertisement and which allows to place it in the determined cultural context of a group or even categories of people. The usage of characteristic of «local « nature of the advertisement is the way of its conversion into a certain element of everyday life;
- usage of elements of something “local” foreshadows the appearance of rather gross advertising campaigns. It mustn’t to pay too great attention to the trends;
- the localization of the expressive means of agitation and propaganda requires primarily the localization of the computer graphics;
- it is necessary to strive for the compatibility of the old and modern traditions within the elements of the advertisement which is being installed in the old part of the city;
- it is necessary to pay also a great attention to the location, nature and quality of the advertisement, signboards and the other elements which aside from their main purpose convey the impression about the streets and the city as a whole;
- for the night look of the city it is necessary besides the street illumination to develop the system of light advertisement, brightening of architectural monuments and large public buildings, celebratory decoration and illumination.

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Art of Embroidering in Gold and Silver of Adygea

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Abstract. The article reviews the embroidery in gold and silver of national costumes of the Circassians. For the purpose of the analysis of the embroideries the historical and comparative methods are used. These techniques help to understand that this ancient art form is popular in the North Caucasus to the present time. The embroidery in gold was always an important element of the folk art of the Circassians. This art form requires a considerable amount of time and work, as well as a lot of knowledge and skills. The masters in their creativity act as the guardians of the ancient traditions of people and their cultural heritage.

Keywords: decorative and applied arts, embroidering in gold and silver, machine embroidery, Circassians, Atalychestvo (Fosterage).

The embroidery in gold was preserved to the present day only on the clothing of the middle of the 19th century. However, among the Circassians there are quite a lot of items of evidence of the ancient origins of this art.

Probably the earliest mention of the art of embroidery in gold by the ancestors of the modern Circassians can be found in works of the Arabian historian and geographer of the 10th century Al-Masudi in the traveler lists, where several types of fabric used by the ancient Circassians were noted as “woven with gold” (Dode, 2001).

The Italian traveler of the 16th century Interiano mentioned that the Circassians used the embroidery in gold to decorate their clothing. According to him the noble Circassian women were the skillful embroiderers (Dode, 2001).

The ancient art of embroidery in gold is reflected also in the Nart epic. One of the most famous episodes of this epic is the competition of young Satanaya with sledge master of tanneries. Amongst other things she was a skilled embroiderer in gold. The epic has that during the day they had to make the most beautiful decorative item. Satanaya had no time to finish her work and asked the sun to stop. The heavenly bodies stopped their movement across the sky, admiring the beauty of Satanaya’s work (Takazov, 2008).

The embroidery was used for decoration of clothing, tobacco pouches, quivers, fans, bandoliers, and sewing outfits.

The embroidery in gold required a considerable amount of time and work, as well as money because of the extremely expensiveness of gold or silver threads. The high cost of these handiworks was down to the expensiveness of the fabric which was applied for the embroidery. The fabric could not always be manufactured by local manufacturers because of the requirement for the quality, while the local manufacturers were mostly simple peasant women, but not professional craftsmen.

It should be noted that Circassia was well-known by the high-quality handicrafts from the
ancient times to the fall of the Black Sea coast. In the early Middle Ages there were the fortresses or fortified trading posts of Byzantium here; and after the fall of Constantinople in 1453 there were the fortresses or fortified trading posts of Genoa. Hence the Circassians received gold and silver threads as well as the fabrics such as satin, brocade, morocco, velvet, silk, thin Angora wool (Studenetskaya, 1989).

Due to the extremely weak development of the commodity-money relations in society the Circassian market of readymade garments, especially those which were with the expensive gold embroidery, was in its infancy.

In fact since its inception and for a long time this activity was not intended in any way to the generation of any income. It also could not have any practical significance in everyday life of the Circassians. However it showed an amazing adaptive capability, developing and spawning the new forms and artistic styles during the hundreds of years.

This is explained by the importance which the embroidery in gold had not only as a mean of obtaining of some real impact and significance of the process of the activity in the eyes of the society and the items themselves. It is quite logical and understandable given that the members of the upper class of the Circassian society were involved in the embroidery in gold.

The embroidery in gold was an exclusively female occupation. It was practiced almost exclusively by the noblewomen. As a rule the mean-born women and girls who served to the nobility could only help. The right of the “authorship” of the product belonged to its owner regardless of the degree of the participation in the manufacturing.

The art of the embroidery in gold required a lot of knowledge and skills. The girls were learned to embroider from an early age. The learning of the art required a considerable amount of time. The working families had not of course this “extra” time, as well as there were not girls or women amongst them who could teach. Moreover they had not enough money to buy the gold threads. Only at the end of the 19th century the possibility of simple families expanded greatly in this respect.

As is well-known, the sons and daughters of the Circassian noble families grew and brought up often not in their own parent families, but in the families of the fellow class. This custom was called “Atalychestvo” (it is like “Fosterage” in European tradition) from the word “atalk”, i.e. “the educator”. The purpose of such education consisted in the digestion of the social norms of the Circassians, as well as of the noble ethics, rules of behavior in the Circassian society and training of necessary practical skills. The decorative arts considered to be the most important and noble skills for the girls.

According to the sources, the noblewomen fostered their wards “in a great strictness” and teaching the sewing art was an important part of their education (4, 1994).

Most of the products which the girl pupils could make or decorate were not intended for them, but became the gifts in accordance with the etiquette. The girls prepared gifts to the family of their future grooms as it was required by the wedding custom.

The art of the embroidery in gold and silver, as part of the broader considered as a manifestation of certain human qualities that should have a noble girl, the future wife and mother of the family. The result of the activity itself, i.e. the embroidered garment or decorative item, was the manifestation of the aesthetic taste, mastery, and working knowledge.

The embroidered clothing ownership was a kind of representation of a certain status, of belonging to the high society. The presentation of a self made or self decorated gift demonstrated the knowledge of customs, assumed an important episode in the life of every participant of the exchanging gifts, as well as was highly valued amongst the Circassian aristocracy.

Finally the personally embroidery in gold by hand was not so much a duty as a privilege due to the noble status of this occupation, that is, the embroidery in gold had a symbolic value not only as the result but also as the process.

In terms of the Circassian caste society, the artistic embroidery was for Circassian noblewoman one of the few activities which were appropriate to their status, because the rest of the household chores were executed by the servants. Thus, it is not surprisingly that the noble Circassian women achieved the highest skill in the embroidery, because they spent most of the time for this “noble” occupation.
The art of embroidery in gold required even a certain type of female hands. The hands were not to be callous, rough. It required also a special care of the nails; the fingertips had to keep their sensitivity (Kaziev and Karpeev, 2003).

In the second half of the 19th century the women-masters acquires the aids from amongst men. There was a separate category of professional artists who were involved in the creating of special patterns for the embroidery (Kaziev and Karpeev, 2003). Using the patterns made by an aid meant a partial relief of the masters of their own creative choice. The patterns became standard, thus their repeatability increased, and the manufacturing process was accelerated.

The appearance of professional artists was the result of the beginning of the commercialization of the Northern-West Caucasus in general crafts and in particular in the applied arts. From the beginning of the 19th century the Circassians began to receive the European factory cloth and thread from the coast, and then from the Russian Empire. From the second half of the century the fabrics for the embroidery began to come from the industrial centers of Russia (Kaziev and Karpeev, 2003).

The factory-supplied yarns and fabric were repeatedly cheaper. Thus, the mean-born people, who were formerly devoid of the products with gold embroidery, had the opportunity to own them and even to participate in their manufacturing, and the clothing with gold and silver embroidery became more available and widespread.

Two ways of making gold or silver pattern were known in the 19th century. The oldest one is the couching, it is called in Circassian the “Adyghe idag”, when the metal wires or metallic inserts were the part of the fabric. The stencil, if it was used, remained within the sewing. It was the most time-consuming, but also the most prestigious kind of the embroidery. It is easily determined, as the pattern does not protrude from the surface of the fabric (Rasine, 2013).

The second method appeared in the second half of the 19th century. It assumed the patterning on the top of the fabric, the pattern was embroidered always with a paper stencil, which greatly facilitated and accelerated the work. The masters of “old school” considered this method to be dilettantish and called it “urban” or “bazaar” (Studenetskaya, 1989).

A wide spread occurrence of the usage of non-metallic thread and sewing, and their combining with gold and silver thread became another expression of the “retreat from the canons” (Kaziev and Karpeev, 2003).

In course of time the new household items such as covers for clocks, lamps, factory blankets, and so on were decorated with the embroidery.

It should be noted that the precious embroidery evolved gradually under the influence of the change of the external conditions and became to the early 20th century far less elitist; but as before it is an important element of folk art and crafts. The masters of the embroidery in gold and silver in their creativity act as the guardians of the ancient traditions of people and their cultural heritage.

References
APPLIED SCIENCE

Engineering
Irrigation Water Management at the Local Level

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Abstract. The current state of the watersheds should be analyzed for the effective management of water resources. At the same time, we should take into account the interest of all kinds of water users and their needs. This article analyzes the process of transferring control over irrigation systems to water users associations (WUA) by the example of the Naryn region of the Kyrgyz Republic. The tasks and structure of the water users association is considered, as well as its practical activities. Ditches are not cleared in a timely manner at the district level and the condition of internal irrigation system worsens. Water users association encountered the problem of insufficiently qualified staff for water resources management, the lack of consistency in the management and financial support and low tariff for the supply of irrigation water. These problems lead to the inefficient use of water resources and demand applied research.

Keywords: Water users association, water resources, irrigation network, sustainable management, water users.

After gaining independence in 1991, the agrarian reform of the Kyrgyz Republic was conducted, and as a result, agricultural systems of the state and collective farms were liquidated. In 1997, the Government of the Kyrgyz Republic accepted a bill on the establishment of Water Users Associations (WUAs). The Law “On Water Users Associations and Unions of Water Users Associations” was adopted on March 15, 2002 [7]. In order to implement the Resolution of the Government of the Kyrgyz Republic “On Water Users Associations in Rural Areas” dated December 1, 2004 in the Naryn region, Water Users Association was established, comprising 12 legally registered WUAs. The functions of organizing the regulation and management of water resources in the region have passed to WUA, they provide irrigation water for 15,024 hectares of land and perform basic tasks, such as irrigation water distribution, and collection of fees for services of irrigation water supply and maintenance of the irrigation network.

This study is based on analysis of evidence on WUA activities in the Naryn region for the period of 2004-2015. The material and methodology includes collection of the information and analysis of WUA activities, SWOT analysis, analysis of materials, reports of various international organizations on WUAs’ work in Kyrgyzstan and other countries. According to the results of the study, the recommendations for WUA management were developed. The Naryn region with four WUAs was selected as a subject of research.

The area of irrigated land in the Naryn region reached 118.4 thousand hectares with five administrative regions. The Naryn district is the administrative district of the Naryn region. The area of the
region is 10.6 thousand hectares, with population of about 44 thousand people according to the 2009 national census, and it includes 14 villages and one urban-type settlement. [1] Irrigated land area makes up 6,773 hectares, divided into irrigated, rainfed, land for perennial plants, hayfields and pastures [4].

The climate is continental and caused by the harsh long winter. The average annual air temperature according to the regional meteorological centers of Naryn reaches 4.261 °C (Figure 1.), with an absolute minimum of -32.3 °C in winter and maximum of +36 °C in summer. The average annual precipitation varies around 306 mm [5]. Maximum rainfall is in spring and early summer in May and June. The snow cover thickness in winter for the period of 1992-2014, averagely reached up to 12.214 cm. The above climatic conditions of this region are suitable for cultivation of crops with a short growing season.

Hydrological network of the Naryn region is quite wide. The main Naryn River and its tributaries merging with the river Kara-Darya, forms Syr Darya. The area is irrigated by the Naryn River system sources, On-Archa, Kazhyrty, Chyrpykty and Ottuk [10]. From these inter-farm canals, water is delivered via open canals and further along the furrows for irrigation. Naryn district water management is responsible for maintenance and operation of inter-farm irrigation system.

In general, the Naryn region has 13,187 hectares of agricultural land [4]. The soil type is a chestnut. The upper layer of the soil contains 30% sand, 38% silt and 32% clay. Soil texture is represented by loam and sandy clay. Soil infiltration ranges around 99-100% [3]. Bias irrigated areas are in the range of 0.03 ... 0.05. Furrows, bands and continuous watering are used for irrigation.

Over 11 years of WUA establishment in the Naryn district, only 4 of them are currently operating, which provide water for 6,773 hectares of land. The total length of the canal, which belongs to the WUA, is 140.01 kilometers. Farm irrigation network is represented by canals like earthworks of 83.281 km, 3.854 km of concrete facing, L-shaped blocks of 8.18 km and 44.67 km of trays [4]. The reasons for the closure of the remaining WUAs were the low pay for water and untimely supply of water during the drought of 2008 and 2014. WUA deliver water to the cultivation of fodder crops: wheat, barley and vegetables mainly.

SWOT analysis conducted for four WUAs, demonstrated strengths, weaknesses, showing the internal effects, as well as opportunities and risks from external factors. Their main functions were analyzed in detail in the matrix. One of the weaknesses of the WUA performance is the financial part, as it is very vulnerable. Funds collected from public are not enough to pay the staff. Therefore, WUA works closely with international organizations within the

![Graph of air temperature and precipitation for the period of 1992–2014](image)
framework of projects supported by them and they cannot upgrade equipment, purchase the necessary tools for irrigation, repair irrigation canals.

Water sources are strategically important water bodies and are managed by Basin Water Management Department of the Ministry of Agriculture of the Kyrgyz Republic. Water is taken from the source provided by the Naryn District Water Management (NDWM), and brought to WUA, and they, in turn, distribute it to end water users. In places where WUA unions are established, water intake is conducted by WUA union itself directly from sources, independent from NDWM and it brings water up to their WUA members. WUA continue delivering water to end-users (land users). The suppliers of irrigation water include a district water management or WUA board (Fig. 3). WUA structure includes a director, an accountant, murabs (Fig. 4). WUA meeting is held once a year, and administrative WUA management is discussed there.

WUA management of water distribution is carried out depending on the water demand. The amount of payment for water is set by Aiyl Kenesh deputies and it makes averagely 250-300 soms per hectare. The schedule of WUA staff is also different. The director and the accountant work 6 months of the year, and marabout work only 4 months during the irrigation season distributing water. Depending on the volume of rainfall, each water user receives water from 1 to 3 times per season. Per 1 hectare of irrigation, water makes 1,500 cubic meters, so water application rate is 1,500 m³ and irrigation rate is 4,500 m³. In case of low rainfall, due to a lack of moisture, there is a need for watering the land during the day and at night. Crops are irrigated 1 or 2 times only.

Water accounting is very important issue for WUA. WUA conducts accounting of water at the point of water distribution from the water supplier, it means from Naryn District Water Resources Management (NDWM) or WUA Union. Irrigation water is supplied in accordance with the irrigation modes of crops and taking into account climatic conditions of the region. Water is supplied for irrigation from June until the end of August. Water distribution is based on farmers’ applications. To account the supplied volume of irrigation water, water-measuring facilities are used — Thomson and Chipoletti weir types.

After analyzing the activities of four WUAs in the Naryn region, the following recommendations were developed to improve WUA performance in the Naryn region:

1. Strengthening the capacity of local governments in order to strengthen food security, planning for WUA “bottom-up”.

2. Introduction of innovative technologies to the industry to promote efficient water irrigation and increase the efficiency of agricultural production.

3. Training of WUA staff to develop plans and business plans for maintenance of irrigation systems.

4. Systematizing payment collection and ensuring transparency to the public.
5. Training WUA workers to use water-saving effective methods of irrigation.

Effective management of WUAs depends on the modernization of their structures, management of water resources and change of water relations of the farmers. The latter consists in joint participation of WUA, farmers and river basin management in planning and decision-making, participation in management and operation, taking into account the interests of all parties. To improve the efficiency of WUA work, it is necessary to strengthen the relationship and responsibility among water users. The process of water planning can be used as a social tool between government agencies and stakeholders. The development of water resources management plan on the watersheds should include a thorough study of the state of ecosystems and the identification of the main problems of water use, and further selection of the important and priority tasks from them. Sustainable management of water resources is required to take into account and support the implementation of adaptation processes of the tasks on the watershed.
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6. Naryn River Hydrological data in the worldwide center of the surface water Global Runoff Data Centre (GRDC) grdc@bafg.de
Today, semiconductor elements and nonlinear resistive chains are widely used in various areas of automatic equipment, radio electronics, computer facilities and power supply.

Uncontrollable semiconductor diodes as elements of an electric chain, represent the nonlinear asymmetrical active resistance with the size that depends on polarity and the voltage applied to it. The direction where the diode has small resistance, is called direct or forward, and the opposite direction with higher resistance is called return or blocking. Respectively the current flowing through the diode depending on polarity of the applied voltage is called direct or return. One of the important characteristics of the semiconductor diode is the dependence of the current flowing through the diode on the applied voltage. It is possible to build the volt-ampere characteristic of the diode experimentally or according to reference data.

The important question in analytical research of schemes with gates is the choice of the approximating function of a nonlinear element. It is possible to describe the volt-ampere characteristic of direct current of the semiconductor diode with a function of $i = au^2$. 

FIG. 1. Scheme of the diode connected in series with a resistance.
We will assume that the diode with $R$ resistance connected in series (fig.1.) is connected to a network with voltage:

$$u = U_m \sin \omega t .$$

(1)

According to the second law of Kirchhoff:

$$u = u_d + ri .$$

(2)

Considering the approximating function, we can write:

$$u = \sqrt{\frac{i}{a}} + ri .$$

(3)

After some transformations we obtain the following equation:

$$r^2 i^2 - i \left(2ru + \frac{1}{a}\right) + u^2 = 0 ,$$

from where,

$$i = \frac{(2rau + 1) - \sqrt{4rau + 1}}{2r^2 a} .$$

(4)

Here the minus sign before the radical considers that at voltage $u=0$, the current will also be equal to zero.

In the method of the chosen points, considering the volt-ampere characteristic of the D226 diode, we have $a=0.41$.

On the basis of equation (4) with use of the computer, it is possible to calculate and build the graph of change of the current in time. Fig. 2. shows these dependences at various values of resistance $R$ for input voltage $u = 100 \sin \omega t$.

We will carry out the theoretical analysis of the scheme provided on Fig. 3. where the diode, inductive and active resistance are connected in series. For the analysis of this chain we offer to use the numerical solution of the equation of a chain condition.
The equations of this chain are as follows:

$$u = u_d + L \frac{di}{dt} + ir.$$  \hspace{1cm} (5)

Using more exact approximating function $i = a u_d^2$, we will get:

$$u = \sqrt[4]{I a} + L \frac{di}{dt} + ir.$$  \hspace{1cm} (6)

At $u = U_m \sin \omega t$ we have:

$$\frac{di}{dt} = \frac{I}{L} \left[ U_m \sin \omega t - \sqrt[4]{I a} - ir \right].$$  \hspace{1cm} (7)

Apply numerical Euler’s method to solve equation (7):

$$i_n = i_{n-1} + \frac{I}{L} \left( U_m \sin \omega t_{n-1} - \sqrt[4]{I a} - i_{n-1} \cdot r \right) \cdot h.$$  \hspace{1cm} (8)

Fig. 4. shows the current curves built after solving equation (7) with a numerical method using the computer. Apparently from this dependence, a relative smoothing of the current curve follows. The shape of the current curve depends on a ratio of parameters of a chain $L$ and $R$. 
In conclusion, it should be noted that the diode resistive nonlinear chain consisting of the diode, the active resistance and the inductance can be analyzed by solving the equations of a chain condition by a numerical Euler’s method. The offered method allows to analyze the set modes and transition processes of chains at various parameters.

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Research of the Modes of Electric Chains by Reducing the Equations of State to a Standard Type in Power Supply Systems

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Abstract. The article describes the method to get the algebraic and differential equations of electric chains in the relative units, allowing to reduce the number of factors and resulting equations to a standard mathematical type.

Keywords: diode, nonlinear resistive chains, volt-ampere characteristic, resistance, capacity, nominal voltage, inductance.

Now there is a set of analytical, graphic and numerical methods of calculation of linear and nonlinear chains which are based on solution of the equations of a chain built on the basis of the laws of electrical equipment. Thus, in many cases variables and coefficients are expressed in nominal units [1].

We offered a way of building the algebraic and differential equations of the chains in relative units allowing to reduce the number of coefficients and bring equations to a standard mathematical type. Besides, there is an opportunity to analyze the modes in nonlinear chains without determination of numerical values, coefficients of approximation of the characteristics of nonlinear elements.

FIG. 1. Two and three-element linear electric chain
Fig. 1.a shows the two-element linear electric chain which is an equivalent chain of power transmission lines. At a sinusoidal form of the supply voltage curve, the equation of the chain is as follows:

\[ U_m \sin(\omega t + \psi) = L \frac{di}{dt} + ri. \]  

(1)

where, to unknown variables current is. Inductance \( L \) and active resistance \( r \) are the coefficients of dependence (1).

Introduce relative and basic variables:

\[ Y_m = \frac{U_m}{u_0}; \quad \tau = \omega t; \quad x = \frac{i}{i_0}; \quad \sigma = \frac{r}{\omega L}; \quad i_0 = \frac{u_0}{\omega L}. \]

The rated power supply voltage can be accepted as basic voltage. After some transformations, from (1) we have:

\[ \frac{dx}{dt} + \sigma x = Y_m \sin(\tau + \psi). \]  

(2)

Comparison of dependences (1) and (2) shows that the rated equation (2) has a standard mathematical appearance and is characterized by only one coefficient. Further, using values \( Y_m \) and \( \sigma \), it is possible to solve equation (2) by the known analytical method recommended for the uniform differential equations or by a numerical method. Fig. 2.a shows the result of solution of the equation by a numerical method of Euler using the computer for \( \sigma = 1.5; \ Y_m = 100; \ \psi = \pi/6. \)

A method of building an equivalent chain in relative units is used with success in the calculation of the short circuit current at the highest steps of power supply systems [2].

Fig. 1.b shows the scheme of the electric ferromagnetic chain consisting of the active resistance, a ferromagnetic element and the capacity connected in series, described by the following dependence:

\[ u = ri + w \frac{d\phi}{dt} + \frac{1}{C} \int i dt. \]  

(3)

Here, \( w, \phi \) – the number of turns and magnetic flux of the ferromagnetic element.

Assuming that the curve of magnetization of the ferromagnetic element is approximated by a power function of the seventh order:

\[ iw = k\phi^7 \quad \text{w} \quad u = U_m \sin(\omega t + \psi),. \]

we will get,

\[ w \frac{d^2\phi}{dt^2} + \frac{rk}{w} \frac{d\phi^7}{dt} + k \frac{\phi^7}{\omega C} = \omega U_m \cos(\omega t + \psi). \]  

(4)

Here, \( k \) – the coefficient of the approximating function of a magnetization curve of the ferromagnetic element.

By substituting the variables:

\[ Y_m = \frac{U_m}{u_0}; \quad \tau = \omega t; \quad x = \frac{\phi}{\phi_0}, \]

we have,

\[ \frac{d^2x}{dt^2} + \sigma \frac{dx^7}{d\tau} + x^7 = Y_m \cos(\tau + \psi). \]  

(5)
Thus,

\[ \sigma = r \omega C; \quad \Phi_\delta = \sqrt{\frac{w^2 \omega^2}{C} \frac{k}{k}} \quad u_\delta = \omega w \Phi_\delta. \]

Dependence (5) includes only one coefficient \( \sigma \) and there is no coefficient of approximation of the characteristic of the ferromagnetic element. Solutions of this equation for the set mode can be obtained analytically, considering the main harmonica of magnetic flux [3].

Using known methods of small parameter, slowly changing amplitudes or numerical methods of the solution of the differential equations, it is possible to describe transition process when such nonlinear chain is connected to a network [4].

Fig. 1.\( \nu \) shows the nonlinear chain with the semiconductor diode, inductance and active resistance connected in series. The volt-ampere characteristic of the semiconductor diode for direct current can be expressed by a function:

\[ i = au^4, \]

where, \( a \) – the approximation coefficient.

FIG. 2. Curve changes of \( x=f(\tau) \) conditions of a chain:
(a) at \( \sigma=1.5; \ Y_m'=100; \ \psi=\pi/6; \) (b) at \( Y_m'=100; \ \delta=1.0; \ \psi=0 \)
The equation for such chain at connection of sinusoidal voltage is as follows:

\[
L \frac{di}{dt} + ri + 4 \sqrt{i} = U_m \sin(\omega t + \psi).
\]  

By introducing dimensionless variables, we will get:

\[
\frac{dx}{dt} = Y_m \sin(\tau + \psi) - 4\sqrt{x} - \delta x.
\]  

Here,

\[
x = \frac{i}{i_0}; \quad Y_m = \frac{U_m}{u_0}; \quad \delta = \frac{1}{\omega L}; \quad i_0 = \sqrt{\frac{1}{(\omega L)^4 \cdot a}}; \quad u_0 = \delta \omega L.
\]

Dependence (7) differs from equation (6) by only one coefficient \(\delta\) and the lack of the approximation coefficient of the volt-ampere characteristic, direct current of the diode. We can solve equation (7) on the basis of one numerical method of solving the differential equations. Fig. 2.b shows the curve of change of \(x=f(\tau)\) built by solving the equation of a chain condition by a numerical method using the computer. Thus \(Y_m=100; \ \delta=1.0; \ \psi=0\) is accepted.

Thus, the linear and nonlinear chains can be analyzed by reduction of the equations of state to a standard type with the minimum coefficients. Such method allows analyzing the modes of nonlinear chains without determination of numerical values of the approximation coefficients of nonlinear characteristics.

References

Medicine
Factors Contributing to the Development of Bronchial Asthma

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Abstract. The study of risk factors leading to the development of asthma, conducted in the form of a survey and interviews. 52% of patients with a diagnosis of asthma noted the presence of the disease among close relatives. Among the risk factors that lead to bronchial asthma, the most common are pollen, tobacco (49.1%). 59.2% of patients diagnosed with asthma do not follow the diet. 27.3% of them are abused bitter, salty and high cholesterol food. 44% do not get enough fruits and vegetables, protein-rich foods.

Keywords: asthma, nurses, primary health care, prevention, risk factors.

Asthma, which is considered one of the «diseases of civilization» is — a chronic disease, susceptible to progression, have a negative impact on all aspects of human life [2,7,8,9].

At the beginning of the XXI century in the study of asthma scientists have established three main features of it. Firstly, the trend toward wide spreading of the disease will be observed for another 10 years. Secondly, bronchial asthma is not only medical and social — economic problem. Third, to improve the effectiveness of treatment of asthma epidemiologic supervision plays an important role, but in all over the world and especially in the CIS countries, such supervision is not carried out enough [1,2,3,6].

According to the known epidemiologists asthma incidence among the middle-aged is — 5% among children — 10%. According to forecasts, the prevalence of the disease in the next 10 years will increase by 1–2%, and will be affected all age groups [4,5,7,8].

Purpose of the study. The study of risk factors leading to the development of asthma and the development of measures to reduce them.

Material and methods. The main objects of the study were patients with bronchial asthma. The study was carried out by lifestyle survey interviews with completed questionnaires, as well as by direct examination. Sociological research covered 100 patients with bronchial asthma (the study group) and 100 patients without asthma, but living in similar conditions (control group).

Results: Development of asthma is closely related to the effect of exogenous and genetic (environmental) factors. Knowledge of various risk factors for asthma may contribute to its prevention. Among the many factors that increase the likelihood of developing asthma, uncontrolled release (hereditary and biological) and managed (amenable to correction — a way of life, family).

According to our data, 52.0% of patients were among close relatives of patients with bronchial asthma in varying degrees of severity.

The occurrence of asthma plays an important role for acute respiratory infection (ARI), upper respiratory tract. Thus, patients have suffered
throughout the year with ARI 4 or more times accounted for 22.7%, 2.3 times — 53.7%, 1 time — 23.6%. In the control group recover from ARI less than 1 time a year makes — 78.7%, 2.3–15.2%, more than 4 times — 6.1%.

Among patients with asthma, workers of industrial enterprises accounted for 34% of operating rural areas — 28% of workers employed in construction — 5.1%, transport workers — 6%, those that are associated with food production — 11%. In 52% of patients overall work experience in the specialty was 9 years and more, 20% of patients 6–8 years, 28% — 4–5 years. The risk of disease increases as working experience. It has been established that the severity of occupational asthma is mainly determined by the duration and severity of symptoms of the disease, is largely dependent on the age, sex, professional pest factor atopy smoking.

Various allergens sensitize the airways, creating in predisposed individuals conditions for the development of allergic inflammation of the bronchi. Risk factors that cause disease have 55.0% of the patients were pollen, at 33.0% vegetable disputes epidermal allergens, at 12.0% — food products, at 10.0% — drugs (antibiotics), serum vaccine. In control individuals group this was respectively 9.4, 4.0, 4.7 and 2.7%.

As a result, the survey found out that most of the patients were in contact with the allergen in the textile, spinning and weaving, shoe factories, brick factories, refineries. These enterprises allergens affect the mucosa of the upper respiratory tract. In working with long-term contact with allergens can cause an outbreak.

On the severity of the disease directly affects the nature of the diet and the origin of the disease. According to the survey, 59.2% of patients of the main group involved in the study, in general, do not adhere to the diet. Thus, 10.4% of patients consume bitter and salty products, 16.9% — foods rich in cholesterol, 19.9% — fried foods. In the control group, the figures were 2.4%, 7.8%, 8.4%. In addition, patients consume flour products, cereals, milk, meat products, fish, fruits and vegetables in an amount of the required amount to 66% in the main group, and up to 77.4% — in the control.

An important role in the prevention of treatment of bronchial asthma is played daily exercise, relaxation, walking in the fresh air, exercise and prevention of opportunistic diseases.

The clinical course of the disease may be exacerbated by stress caused by the increasing incidence of asthmatic symptoms in patients. As a result, various accidents, family conflict, increasing incidence of asthmatic symptoms was observed in 42.9% of patients the main group and 33.4% of those in the control group.

The health status of patients connected to the improvement of medical activity, medical attention, as well as the acquisition of medical knowledge. Medical knowledge about asthma had, to 10.4% of the surveyed primary and 7.8% — in the control group. 27% were familiar with special medical literature, 24.4% received the knowledge about the disease of popular pamphlets, 38.2% are studying articles in medical journals. For information on the care of patients with asthma surveyed are obtained from medical journals (25.8%), sanitary pamphlets, posters (60%), interview with the medical staff (9.9%), from acquaintances (17.5%) and family members (13.0%).

The survey revealed that for the last 2–3 years, 61.2% of patients of the main group, who are on the dispensary list, do not pass a full medical examination. In the control group of patients it was 39.5%. In addition, only 13.5% of patients seek treatment, and 8.9% of patients — for diagnosis, 26.5% do not apply to patients in general.

**Conclusions:**

1. 52% of patients diagnosed with asthma suffer from this disease close relatives.
2. 76.4% of the patients suffered from viral diseases of the upper airway more than 2–4 times a year.
3. Among the risk factors that lead to bronchial asthma, the most common are pollen, tobacco (49.1%);
4. Acute respiratory viral diseases of the upper respiratory tract plays an important role in the exacerbation of the disease in 32.4% of patients with a diagnosis of asthma.
5. Hazards related to the profession, occurred in 25.5% of the respondents, i.e. occurs more than 2 times more often than the control group.
6. Among the patients was dominated by workers of industrial and agricultural enterprises
(62.4%). In 69.5% of patients experience greater than 9 years, 51.7% of respondents over 9 years working in the specialty.

7. 59.2% of patients with a diagnosis of asthma diet did not observe at all. In addition, 27.3% of the patients abused bitter, salty and high cholesterol food. 44% of patients do not get enough fruits and vegetables, protein-rich foods.

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The availability of Prenatal Ultrasound Diagnostics of Ventricular Septal Defect of the Fetal Heart

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Summary. Assessment of fetal sonographic extended study and identification of fetal abnormality dictates the need for expanded echocardiography. In the study of the fetal heart is necessary to carry out the study of a four-slice, slices through the three vessels in the «B-mode», as well as color Doppler, which significantly improves prenatal diagnosis VSD in the second trimester of pregnancy.

Keyword: sonography, defect of the heart, fetal heart, prenatal diagnosis, pregnancy, echocardiography.

Despite the rapid development of the fetal echocardiography in the last decade, the accuracy of prenatal diagnosis of Congenital Heart Disease (CHD) remains relatively low, with significant variations from 6,0–46,0 % depending on the level of specialized care and the use of new technologies in the prenatal diagnosis [2, 4, 6].

Prenatal diagnosis, which includes non-invasive methods of investigation, allowing according to various authors identify 80 % of the congenital malformations (CM) is including congenital heart disease in which in some cases must be urgent intervention after birth, or viewing the issue of abortion. Among the so-called «pale» malformations ventricular septal defect (VSD) is in first place, accounting for 4: 1000 live births [1, 3, 7].

Diagnosis VSD is set in the case of distinct visualization ehonegativnoe free space in the interventricular septum with sharp edges, resulting in more than one view [2, 5, 7].

In connection with the stated aim of the study exploring the possibility of transabdominal echocardiography isolated Ventricular septal Defect (VSD) in terms of 16–20 weeks of gestation.

Materials and methods

To implement this goal a study conducted at the National Center «Mother and Child Screening» mode where screening examined 29,358 pregnant women in II trimester of pregnancy. The study reported 93
cases of CHD, including 37 VSD fetal heart: isolated VSD (10), in conjunction with a chromosomal syndrome (16) and extracardiac pathology (11).

Age of pregnant women who had reported cases of CHD fetuses ranged from 18 to 40 years and averaged 27 years (Table. 1). Analysis of obstetric history showed that among examinees of the main group 39 % — nulliparous, 61 % — multiparous.

<table>
<thead>
<tr>
<th>Agepregnant</th>
<th>&lt;20 s</th>
<th>21–30 years</th>
<th>&gt; 31 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numberofpregnantwomen</td>
<td>15</td>
<td>49</td>
<td>36</td>
</tr>
<tr>
<td>Thepercentageoftotal</td>
<td>16.2</td>
<td>52.6</td>
<td>31.2</td>
</tr>
</tbody>
</table>

Thus, the percentage of patients with CHD fetuses / children in our study totaled multiparous women aged 21 to 40 years.

Indications of risk for sighting echocardiography is conditionally divided on the testimony of the mother and from the fetus.

Indications of the mother: age older than 30 years, the UPU history from relatives or the birth of children with CHD, diabetes in pregnancy, communicable diseases of mother, exposure to teratogens during pregnancy, the presence of severe systemic diseases (systemic lupus erythematosus, rheumatoid arthritis, etc...).

Indications from the fetus: polyhydramnios, Non-immune fetal hydrops, extracardiac fetal malformations, cardiomegaly, rhythm disturbance, abnormal four-chamber section of the fetal heart, markers of genetic aberrations in the fetus IUGR.

According to Medvedev, MV (2000) only 10 % of patients with CHD fetus have one or more of the risk factors, and the largest group (90 %) do not fall into the risk group, which allows to conclude that the echocardiographic examination of the fetus is advantageously carried out for all pregnant women, without exception, that is. e. screening mode.

Echocardiography was performed on fetal heart ultrasound machine PHILIPS «HD 11XE» with Convex probe with a frequency range of 2,0–5,0 MHz and surround with a frequency range 4,0–8,0 MHz.

In the diagnosis of fetal CHD great diagnostic importance is the standardization of research and development of standard indicators of fetal heart at different stages of pregnancy. Fetal heart tab occurs at 6–8 weeks of pregnancy. Detailed ultrasound assessment of the fetal heart structures produced are generally not before 16–20 weeks gestation using transabdominal approach.

System (segmental) approach in the diagnosis of CHD based on sequential analysis from the perspective of embryonic stages of the formation of the heart and major cardiac structures of various segments of the heart (the atria, ventricles, main artery), ie, coming from the atria to the ventricles. The main stages of the survey include: 1) determination of the position of the heart; 2) the identification of its chambers; 3) evaluation of atrioventricular connection; 4) study of the compounds of the ventricles and major vessels; 5) Identification of related vices.

The study began with the identification of the fetal head position and the spine. Identification of the viscera is needed to more accurately determine the right or left atria. In addition, the anomaly of the heart often associated with abnormalities of the internal organs. There are three positions of the heart: normal; situs inversus, situs ambiguous (isomorphic position), this term refers to an incorrect location of the chest and abdomen. Normally atrium located on the side of the inferior vena cava. The axis of the heart is horizontal. The cross-section of the chest above the diaphragm shows four-chamber slice. This cut is recognized by the tip and base of the heart and its location in the chest. The right ventricle and the right atrium is located in front of the left ventricle and atrium (left-side heart). The normal position of the heart— the heart created on the right and located at the left. When dextrocardia heart is located on the right side, and the top facing the right. When mesocardium heart has a central location and the tip facing the front. Dextrocardiamesocardium and should be differentiated from
external causes of the position of the heart (diaphragmatic hernia, tumors of the lungs). In such cases, it can be used the term «dekstrapozitsiya heart».

Four-position allows you to define atrial septal (WFP) to the oval window (G) in the center, a division of the primary and secondary parts of the MPP. GS is equipped with a valve (valve GS), opens into the left atrium. Atria communicates with the ventricles through the atrioventricular valves; leaf (septal) tricuspid valve located more apically than the mitral valve. This feature is important to differentiate between the ventricles of the heart.

With the aim of forecasting in a period of 16–20 weeks, surveyed the levels of proteins and placental hormones: alpha-fetoprotein (AFP), human chorionic gonadotropin (hCG). The study was conducted by enzyme immunoassay using a multifunctional biochemistry analyzer Delphi / Victor and chemicals company WallacOy (Finland) with the software for the calculation of the risk of fetal chromosomal syndrome.

For the upper limit of normal concentrations of serum markers taken, the average value, which for this period amounted to 2.0 MoM, the lower 0.5 MoM. From the ratio of the levels of serum markers in combination with the age of a woman using a computer program evaluated individual risk of having a baby with a genetic syndrome.

Statistical analysis included an assessment of the significance of differences of mean values of measurements by Student’s test with a given level of confidence (p <0.05).

Results and discussion

The study of the factors contributing to the development of congenital fetal heart it possible to identify five major groups of causes (Table 2).

<table>
<thead>
<tr>
<th>TABLE 2. Risk factors for CHD in the fetus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sign</strong></td>
</tr>
<tr>
<td><strong>n = 93</strong></td>
</tr>
<tr>
<td>Obstetric and gynecological history</td>
</tr>
<tr>
<td>Age, years</td>
</tr>
<tr>
<td>Pregnancy 1–2</td>
</tr>
<tr>
<td>Pregnancy 3–4</td>
</tr>
<tr>
<td>Abortions</td>
</tr>
<tr>
<td>Stillbirths</td>
</tr>
<tr>
<td>Developing pregnancy</td>
</tr>
<tr>
<td>Family history</td>
</tr>
<tr>
<td>UPU mother</td>
</tr>
<tr>
<td>UPU father</td>
</tr>
<tr>
<td>CHD previous children</td>
</tr>
<tr>
<td>Diseases of the mother</td>
</tr>
<tr>
<td>Chronic liver disease</td>
</tr>
<tr>
<td>Chronic renal failure</td>
</tr>
<tr>
<td>Systemic diseases</td>
</tr>
<tr>
<td>Endocrinopathies</td>
</tr>
</tbody>
</table>
Features of this pregnancy

<table>
<thead>
<tr>
<th>Condition</th>
<th>Cases</th>
<th>Mean ± SD</th>
<th>Null</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>5</td>
<td>5.4 ± 1.3</td>
<td>1</td>
<td>0.79 ± 0.5</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>

According to the data the most significant risk factors for the development of CHD (VSD) in the basic group according to the obstetric and gynecological history were 3–4 pregnancy was 51.6 % compared with the control group, as well as burdened obstetrical history: abortions in early pregnancy, stillbirth and developing pregnancy (p <0.05).

Family history, taking into account the presence of CHD in the pregnancy itself and its members, as different statistical significance.

Among the chronic disorders of mother, most significant were chronic pyelonephritis in 22.5 % in the study group and in 10.2 % of cases (p <0.05) in the control group. Analysis of the flow of this pregnancy in women of the main group showed the effect of the transferred acute viral infection in the I trimester of pregnancy in 34.4 % of cases, and the influence of intrauterine infection in 30.1 % of cases compared with the control group, respectively (7.8 % and 9.4 %, p <0.05).

Prenatal echographic fetal assessment has identified the development of placental insufficiency in 22.5 % of cases, accompanied by intrauterine growth retardation in 18.2 % of cases with symptoms of arrhythmia in 19.3 % of cases in pregnant women of the main group (p <0.05).

Thus, risk assessment allowed us to determine the most significant predictors of VSD fetus: burdened obstetrical history, the presence of CHD in the family endured acute infection in the first trimester of pregnancy and chronic pathology of the urinary tract, accompanied by changes in the state of fetal IUGR, fetal hydrops, a chromosomal abnormality against the background of placental insufficiency.

The next stage of our study was to determine the morphometric parameters of the fetal heart according echographic study (Table 3).
TABLE 3. Morphometric parameters echographic study of the fetal heart (mm)

<table>
<thead>
<tr>
<th>Surveyed groups</th>
<th>LV</th>
<th>RV</th>
<th>LP</th>
<th>PP</th>
<th>LV</th>
<th>RV</th>
<th>LP</th>
<th>PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>$8,1 \pm 0,01$</td>
<td>$7,7 \pm 0,01$</td>
<td>$9,7 \pm 0,01$</td>
<td>$10,1 \pm 0,01$</td>
<td>$10,4$</td>
<td>$9,1$</td>
<td>$9,7$</td>
<td>$9,2$</td>
</tr>
<tr>
<td>VSD</td>
<td>$9,3 \pm 0,01$</td>
<td>$8,9 \pm 0,01$</td>
<td>$10,5 \pm 0,01$</td>
<td>$10,4 \pm 0,01$</td>
<td>$10,6$</td>
<td>$8,5$</td>
<td>$10,1$</td>
<td>$9,7$</td>
</tr>
</tbody>
</table>

Note: $P <0.05$ between control and VSD

As can be seen from the data for the evaluation of the projection of the fetal heart from a four-pregnant control, and the main group showed a statistically significant difference ($p <0.05$).

In assessing the performance cardiometry fetus should consider not only the absolute values of the size of the cavities of the heart, but also the ratio of the right and left chambers (left ventricular indices / RV) the value of which was 1.05 and 0.91, respectively, at 20 weeks gestation.

The projection of a four-slice fetal heart allowed to examine the following components of the interventricular septum:

— Small membranous part of the interventricular septum adjacent to the septal commissure of the tricuspid valve flaps;

— Supply of the interventricular septum that separates the ventricles blowing departments;

— Department of trabecular muscular interventricular septum separating the LV and RV.

According to the results of our investigations in 10 cases, an isolated defect VSD mean diameter was in the range of 1.7 mm ± 4.2.

Septal defect did not cause marked changes in the indices ($LV / RV = 0.9; RV / LV = 1.1$) and their diagnosis can be based on detection of abnormal flows.

The results of the study of prenatal diagnostic nosology UPU identified various sonographic markers, and combinations thereof, registered in 8 of 10 (80 %) fetuses with VSD (Table 4).

TABLE 4. Additional sonographic signs detected in fetuses with VSD in the II trimester

<table>
<thead>
<tr>
<th>Signs</th>
<th>VSD, n = 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cysts of the choroid plexus of the lateral ventricles</td>
<td>2</td>
</tr>
<tr>
<td>IUGR</td>
<td>3</td>
</tr>
<tr>
<td>Water shortage</td>
<td>2</td>
</tr>
<tr>
<td>Polyhydramnios</td>
<td>1</td>
</tr>
</tbody>
</table>

Given the presence of one or two additional ultrasonographic findings of all pregnant women were tested levels of biochemical markers of chromosomal syndromes AFP / HCG (Table 5).

Research biochemical markers showed a statistically significant decrease in the level of hCG in the background of increased rates of AFP.

The drive follows a clinical observation.

Re-pregnant 30 years, physical health. In the history of two miscarriages. The spouse of the patient 32, somatically healthy. Occupational hazard couple did not notice. Bad habits are not. Genealogy Family history is not burdened. The patient is at the dispensary at 12 weeks of pregnancy. This pregnancy was a threat of miscarriage in the early stages. In a screening study in the Republican Center of the patient is directed at 18 weeks of pregnancy.
During transabdominal ultrasound conducted at 18 weeks of gestation in the womb one live fetus. The heart rate is 166 beats per minute.

As for the suspicion of congenital heart disease conducted prenatal echocardiography, during which found that the fetal heart is typically located in the chest. Its dimensions are normal. Chambers of the heart — 4 chamber sizes are proportional. In the study of intracardiac septa found VSD 5 mm in diameter, the presence of which was confirmed when using color Doppler.

Atrioventricular valves at the same level. The structure and operation of their not changed, pathological regurgitation was detected. The structure of the walls of the heart is not changed. In the study of the main arteries it found that the course of their correct size proportional.

Other anatomical features of the fetus has not been revealed. Chorion was located on the front wall. In studying the walls of the uterus found a local thickening of the anterior wall of the myometrium. In the study of blood flow in the ductus venosus features were found.

Taking into account that the identification of an isolated VSD in the prenatal period does not require changing tactics of pregnancy, we recommend that the dynamic fetal assessment in a specialized institution, followed by delivery to the perinatal center.

Thus, transabdominal sonography in terms of 16–20 weeks of gestation to diagnose isolated VSD in women at high risk of CHD fetus. Of particular importance is the collection of family and obstetric history. Assessment of fetal sonographic extended study and identification of fetal abnormality dictates the need for expanded echocardiography.

Worthy of note revealed an isolated reduction of biochemical parameters — β-hCG, considered now as a marker of fetal CHD [6].

In the study of the fetal heart is necessary to carry out the study of a four-slice, slices through the three vessels in the «B-mode», as well as color Doppler, which significantly improves prenatal diagnosis VSD in the second trimester of pregnancy.

### References


### Table 5. Indicators of biochemical markers of chromosomal syndromes in pregnant women

<table>
<thead>
<tr>
<th>Indicators</th>
<th>The main group, n = 21</th>
<th>The control group, n = 27</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFP</td>
<td>3,85 ± 0,5</td>
<td>2,76 ± 0,3</td>
<td>&gt; 0.05</td>
</tr>
<tr>
<td>HCG</td>
<td>1,56 ± 0,2</td>
<td>0,25 ± 0,1</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>