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FORMATION OF INFORMATION AND COMMUNICATION COMPETENCY IN THE PROCESS OF GENERAL INTELLIGENCE DEVELOPMENT OF FUTURE SPECIALISTS

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The article deals with information and communication competency as integral part of general intelligence knowledge and skills, which are important for successful professional activity; notions of competence and competency are differentiated; types of activities necessary for general intelligence, information and communication skills development are distinguished.

Keywords: information and communication competency, intelligence, information and communication skills

Global transformation of industrial society into information and communication society in contemporary world leads to penetration of information and communication into all spheres of people's life, it involves emergence and development of new quality of information and communication structures types and processes as well as fundamentally reevaluation of information and communication nature of social reality, modern changes in social-communicative sphere, place and role of information and communication in general society evolution.

In this respect the most important task of existing education becomes preparing of graduate who obtained effective methods of working with information, capable to implement his knowledge and skills in own creative product, ready for personal development and self-actualization as both professionally and personally. One way to achieve this goal is organization of productive educational-cognitive activity where general intelligence development will be aimed at formation of information and communication competency.

As information and communication competence we mean integrative quality of person expressed in capability of future specialist to assimilate information for effective communication, solving educational-cognitive and other personal problems and tasks. Information and communication competences are necessary to modern graduate of higher institution for mastering his further professional activity. Above-noted competences also underlie successful adaptation of person in contemporary world.

It's possible to distinguish three components in information and communication competency: personal, managerial and pragmatic. Formation and development of these components provide the commitment of showing the competency, of realizing the sense and personal importance of own activity of future specialist, of effective self-management, experience of the competency application in the process of solving professional tasks, self-control, self-assessment and self-consciousness.[6]

Particular importance of information and communication competency increases in response to quick change of information traffic and exploit technologies when the necessity of developing adaptation skills in information society grows. There are two contradicting problems to be defined here: the formidable part of participants of educational process (pupils, students and teachers) is not ready to use information technologies or visa versa their usage of interactive facilities is excessive and leads to diminishing of all other communication types, that results in uncommunicativeness (F. Jameson).[7]

The problem of extensive use of computer technologies in educational sphere during recent decades attract interest of Russian pedagogical science. Substantial contribution to solving the problem of computer technology in education made Russian and foreign scientists: G.R. Gromov, V.I. Gritsenko, V.F. Sholohovich, O.I. Agapova, O.A. Krivosheev, S. Papert, G. Kleimann, B. Sendov, B. Hunter etc.

Introduction of information and communication technologies into educational process involves not only emergence of modern technical devices, but also new forms and methods of teaching. Different didactic problems of education cybernation in our country are described in works of A.P.Ershov, A.A. Kuznetsov, T.A. Sergeeva, I.V. Robert; methodical problems – B.S. Gershunsky, E.I. Mashbits, N.F. Talisinoi; psychological problems – V.V. Rubtsov, V.V. Tikhomirov, etc.

In scientific investigations and publications devoted to modernization of education the main notions are competence and competency which don't have fixed definition and are interpreted according to author's position.

Competency is a result of education expressed in individual acquisition of definite number of working methods toward specific item of activity. The number of learning ways of activity is relevant over a long time period and is formed during several years by different means distinctive for each society, social stratum and age. The level of competency is very

important not only for professionalism of company personnel and stable work but also for life quality of employees of the firm and country in general.

Competence is a range of powers committed by law, charter or any other document to certain agency or official body; it is knowledge or experience in one or another field [1, p. 78].

Competency is already formed personal quality (or complex or qualities) of specialist and minimum required experience of specific activity [5].

Many authors agree that information competency is multilevel notion. There are different quantity of levels of information competency in different researches, which in fact make level-hierarchy: each next level includes features of the previous one and has some own specific features which differ from it. According to progression in this hierarchy new mentality is being formed and as the result of it – information competency. It's obvious that information competency is the key factor in lifelong learning and the first step on the way of achieving educational goals, so it's needed to be developed [2].

Formation and development of information competencies involves the following activities:

- acquaintance with the computer as a device to work with the information, getting the technical skills for working with different devices.

- be master of the means of working with information: searching in catalogs, systems, hierarchical structures;

- Systematization, analysis and selection of information (different types of sorting, filters, queries, structured file system, database design, etc.).

- Transformation of information (from the graphics – in to textual, from the analog – to digital, etc.);

- A critical attitude to information received the ability to distinguish main thingth, to evaluate the reliability (relevance of the inquiry, network hoaxes, etc.);

- The ability to use information and telecommunicational technologies for solution of a wide class of tasks.

Speaking about communicative competence, we can distinguish the following activities in this direction:

- Possession of the forms of oral speech (monologue, dialogue, the ability to ask a question, give an oral argument in response, discussion, defense of the project, etc.);

- Maintaining dialogue «man» – a «technical system» (understanding the principles of the interface, working with dialog boxes, setting the parameters of the medium, etc.);

- the ability to present themselves orally and in writing form, possession of stylistic tech-

niques of text design (e-mails, netiquette, creating text documents from a template, the rules of giving information in a presentation, etc.);

- possession of telecommunications for organizing the communication between remote collocutors (understanding the capabilities of different types of communication, the nuances of their use, etc.);

- understanding of the fact of variety of languages, possession of language, linguistic competence (including – formal languages, coding systems, programming languages);

- Ability to work in a group, to seek and find a compromise (the work on a joint software project, the interaction of the web, client-server technology, networking applications, etc.);

- tolerance, the ability to build a dialogue with representatives of the other views (the existence in the network community, telecommunications with remote collocutors, etc.) [3].

Possession of informational and communication competences promotes the formation of students' communicative-informational competence, which is especially important now, when the social order of modern society requires the preparation of professionals with information – communicative competence, who can influence the leading decision-making, and who can set the tone of innovation to professional activities.

According to this, the need for inclusion the student's into educational process is increase, aimed at improving the business culture and professionalism, information literacy and competencies: his training in social business communication technologies and new forms of interactive communication, which is adequate to socio-cultural dynamics of the ongoing changes.

The tasks of the development of informative-communication specialist expertise include:

- enrichment of knowledge and skills of computer science and informative-communication technologies;

- the development of communicative, intellectual abilities;

- implementation of the interactive dialogue in a single information space [4].

In order to implement the tasks, it must be properly and clearly define the criteria for informative-communicational specialist and to design and pedagogical conditions of educational space for their achievement, namely the ability to work with the information (data collection, retrieval, transmission, analysis), modeling and design their own professional activity; modeling and design of the team, the ability to navigate the organizational environment based on modern informative-communicational technologies used in their practice of professional activities of modern informative-

communicational technologies, ensuring the effectiveness of professional activity.

From the foregoing it can be concluded that the formation of informative-communicational competence is a prerequisite for the effectiveness of the professional activities of the future specialist. However, the success of this process depends on many factors – the individuality of the student, on forming the collections of high quality educational resources, systematic and purposeful training for teachers in the sphere of informative-communicational technologies; the improving of informative-educational sphere.

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*Materials of Conferences***KEY COMPETENCE AS THE BASIS OF RENEWAL OF THE CONTENTS OF EDUCATION**

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The article studies key competence and the new model of education. It defines competence as a «joint» idea in world educational practice. Ideas of scientists regarding an integration of intellectual, physical, political, social, and aesthetic aspect of knowledge are given, since a person's competence must display itself in various aspects within the new education model. The work studies areas that develop a person's competence in its broad concept as well as instruments to form such competence.

Further we refer to ideas of key competence from points of view of different authors. Besides, its interpretation by State educational standards of graduates' specialties is given. When we speak of realization of pedagogic activity, key competence is necessary – intellectual, emotional, communicative, social, pedagogic, it stimulates professional self-development, self-perfection, realization of one's creative potential.

We also provide characteristics of all key competences and their structure. Ans, we think that the problem to select key competences is one of the central to renew the contents of education.

An idea of competence represents a central, key concept in the world educational practice. First of all, it combines intellectual and skill component of education, secondly, the idea of competence includes an interpretation of the education content that is formed «of a result» («output standard»); thirdly, key competence has an integrative nature as it absorbs a number of homogeneous or close skills and knowledge that refer to broad areas of culture and activity (informational, legislative, etc.) [1].

A new education model, according to scientists, must integrate intellectual, physical, political, social, and aesthetic aspects of knowledge, as a man's competence must reflect in its most various displays. Authors refer education, work, healthcare, culture, politics, environment, ecology, world to areas that develop a man's competence in its broad conception. As for instruments of forming such competence we can outline: general education, professional training, studying at a workplace, family upbringing, general development, mass media, cultural-enlightenment institutions, and all types of a man's activity that provide for carrying out an active civil role of an individual. A transfer to such broad concept of a man's competence opens a new perspective to develop new strategic ideas and actions.

Replacing knowledge that is only needed to form practical actions and productive skills with knowledge and skills that are needed to reveal an overall human potential represents, as scientists think, the first step towards an integrated educational policy that is aimed to serve interests and an individual and society of the future. Such integration is crucial for independent and successful solution of a person's life situations, creating better conditions to interact constructively with other people in different situations, including conflicts [1].

The idea of «competence» comes from a Latin term *competo* – to coincide, correspond, fit, coordinate, suite, be able; *competere* – to know, be able to, achieve; *competentia* –

1) coordination, commensurateness of parts of a whole;

2) rightful belonging. According to a French interpretation, «competent» means authorized.

It also has a legal shade. In English personal features dominate in the term competence: it is interpreted as a capability [2].

S.E. Shilov studies key competence as an ability of a specialist to mobilize his skills and knowledge in his professional activity as well as general means of taking actions. Seeing a direct link between skills and knowledge, the author studies competence as an ability to find and reveal «a procedure, adequate to a problem» [3]. According to the scientist, key competence provides for a specialist's versatility and allow him to: learn (be able to solve problems, educate personally, apply experience, interconnect his knowledge and ordinate it); search (request different databases, consult with experts, receive and process information); think (organize interconnection of the past and future events, take aspects of social development critically, be able to resist uncertainty and difficulty, take a position in discussions and form his own opinion, evaluate); get to down to work (enter a project, take responsibility, be able to organize his work); adapt (be able to master new technologies and communications find a solution) [3].

While studying professional activity, G.A. Lariionova refers «intercultural and intersectoral knowledge, skills, abilities, needed to adapt and act efficiently in different professional societies» to key competence [4, p. 64]. According to her, key competence has an extra-functional character.

Key competence is sometimes called instrumental, impersonal, systematic, general, universal, etc. [5]. It defines attributes that can construct a part or be general for any profession. In the structure of key competence some also outline transferrable skills that reflect an ability to reason on abstract terms, analyze and synthesize, solve problems

(make decisions), adapt, be a leader, work as a part of a team or individually [6].

Key competence base on a person's characteristics and reflect definite behavior means that stand on his psychological traits and include a wide practical context of high universality [7].

Generally, in State general education standards of graduates' specialties, a list of key competence is defined: having an integral idea of education as a special area of social-cultural practice that provides for cultural transmission between generations; having an integral idea of education as a special area of human science activity; knowing scientific basics of psychological-pedagogic, social-human science; knowing basics of business economy, marketing, management in educational institutions; being able to analyze social problems and processes and use modern methods of different fields of science in professional, pedagogic, social activity; being able to organize one's own work on scientific basis; being skilled: to use computer technic in an educational and professional activity, apply modern pedagogic technologies in educational-upbringing process.

In our opinion, developing key competence of future professional training pedagogues provides for an increase in their education level, is necessary for a successful life (self-competence, personal achievements, self-actualisation, self-development), ability and readiness to carry out a productive activity for the good of society.

Authors of an international project «Defining and selecting key competence» refer autonomous reflective act, interactive usage of means, participating in work of heterogeneous groups, critical thinking, solving problems to the key competence.

Key competence is characterized by the fact that it allow one to solve the most difficult and non-standard problems – different problems of the same area (polyfunctionality), problems of subject areas of a person's activity (inter-discipline and over-applicability), that require a high level of intellectual and cognitive skills development from a specialist (versality) – intellectual competence.

I. D. Frumin sees projective work and various individual education forms adequate to develop key competence.

Realization of pedagogic activity requires development of key competence – intellectual, emotional, communicative, social, pedagogic, it stimulates professional self-development, realization of one's creative potential [8].

A key competence has the following characteristics:

It is multi-functional. A competence refers to a key if its mastering allows one to solve different problems in everyday professional of social life. It is necessary master it to achieve important goals and solve different problems in various situation.

A key competence is not applied and is interdisciplinary, it is used in different situations, not only in school, but also in work, family, political area, etc.

Key competence require a significant intellectual development: abstract thinking, self-reflection, defining one's own position, self-evaluation, critical thinking, etc.

A key competence is multi-dimensional it includes various intellectual processes and skills (analytic, critical, communicative, etc), «know-how», and a common sense.

It is essential that a competence require different types of actions:

Act autonomously and reflectively;

Use different means interactively;

Enter social-heterogeneous groups and function within them.

In our opinion, the following aspects must be present in the structure of key competence:

- Competence in the area of independent cognitive activity that is based on mastering means and acquiring knowledge from different information sources, including non-scholar;

- Competence in the area of civil and social activity (carrying out role of a civilian, elector, consumer);

- Competence in field of social-labour activity (including an ability to analyze a situation in a labour market, evaluate one's own professional abilities, orient oneself in norms and ethics of labour relations, skills of self-organization);

- Competence in the household area (including aspects of personal health, family happiness, etc);

- Competence in field of culture-entertainment activity (including the selection of ways and means to use free time that enriches a person in a cultural and spiritual sense).

The suggested approach to defining key competence corresponds to the experience of countries that made a transition towards mastering key competence within education during the last decades (practically all developed counties). Besides, the described approach corresponds to the traditional values of Russian education (orientation to understand the scientific picture of the world, spirituality, social activity).

In this case we can conclude that the problem of selecting basic key competence is one of the central in modernization of education contents.

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The work was submitted to the International Scientific Conference «The problems of quality education», Turkey (Antalya), 16-23, August, 2012, came to the editorial office on 25.07.2012.

NEW INFORMATION TECHNOLOGIES AND THE REAL POSSIBILITIES OF CREATION OF THE OPEN EDUCATIONAL SYSTEM

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The article studies quite an urgent aspect of the modernization of education – usage of new information technologies and real possibilities to form an open education system.

It gives an idea on the necessity to use electronic training as a key direction in education development that provides for an improvement in education process. As the development and the perfection of methods and means of modern information technologies create real possibilities to use them within the education system in order to develop creative skills of a student during his training.

Joining of Kazakhstan to Bolognese process has actualized a transition from knowledge-enlightenment paradigm of education towards its competence part. In terms of informatization of society, a new component of professional competence of professional education tutors arise – informational-technological competence (ITC) that must form within an institution of higher education.

These technologies create the premises for an intensification and openness of the education process: direct feedback, availability of the central data bank, automatization of the processes of calculative, information-search activity, and also processing results of an experiment; automatization of processes of training activity and management results control.

The era of new information and communication technologies has taken its changes into the area of production and education. The civilization steadily approaches the formation of new society that can be reasonably called the Information society, where the leading part belongs not to natural resources and energy, but to the information and scientific knowledge – factors that will define the overall strategic potential of the society, prospects of its further development.

President of the country, N.A. Nazarbayev has clearly outlined the priorities of the country's competitiveness though developing science-intensive and highly-technological enterprises and introduc-

tion of innovations. «...a universal introduction of modern information technologies into education processes must become the Central link of the education system» [8, p. 2].

A number of state documents, such as «Strategy of industrial-innovative development in Republic of Kazakhstan for 2003-2015» [5], the Law of RK «On Science» [4], «State Programme of forming and developing national informative infrastructure of Republic of Kazakhstan» [1], the law of Republic of Kazakhstan «On education» [9], the «State programme of education development up to 2015» [7], the «Concept of informatization of education system in Republic of Kazakhstan» [2], the «Programme of informatization of primary and secondary professional education» [3], the «Programme of informatization of education system» [6], and some others speak of the state of scientific-educational activity as a part of national innovative system.

We should outline that a shift towards electronic education is regarded as a key direction in education development nowadays that provides for an improvement in education process.

Processes of education integration provide for the fact that education becomes open and more effective for all countries. Information and communication technologies that base on the world informative resources, support the development of new education paradigm. Therefore, a purposeful education policy of organizing educational processes in the system of open education in order to learn and transfer experience on the foundations of global interactions in various networks is demanded.

It requires the principle of openness in education systems, decentralization of education. The openness of education systems implies:

- Realization of civil rights for education regarding the interests and free development of individuality;

- That a student himself chooses those educational institutions, forms and means of training that correspond to his interests and needs;

- That open education system provide a person with knowledge that becomes possible through usage of means of communication, such forms of it as electronic mail, network technologies that allow one to receive the required information in short terms of time.

The development of perfection of methods and means of modern information technologies create real possibilities to use them within an education system in order to develop creative skills of a student during his education. We relate real possibilities to construct an open education system that allow each student to choose his own training trajectory; dramatic change in the technology of receiving knowledge through an effective organization of a student's cognitive activity within the process of education due to such important didactic characteristic of a computer, as individualization of training process with preservation of its integrity

by programming and dynamics of education programmes' adaptation, with new information technologies (NIT).

Internet and telecommunication technologies that base on global networks and intellectual computer systems open absolutely new possibilities for tutors and students.

The leading condition to renew the education system as a whole is a continual innovation activity in education that provides a creation of mechanism of adaptation to new economic, social, and demographic situation.

In modern terms of development within the market of education services in Kazakhstan and demands of the era of information technologies, teaching must combine a practiced directive and modern, innovative interactive training model.

Nowadays psychologic-pedagogic science has widely studied different problems of training informatization:

1. Problems of implementing information technologies in training process [10, 11].

2. Theoretic and practical problems of using telecommunication and computer networks in education [12, 13].

3. Various aspects of informatization of professional training of specialists [14, 15].

4. Processes of informatization in training a pedagogue of professional education [16].

5. Problems of developing electronic, computer provision of education process.

In other words, scientific and methodic requirements for creation of electronic textbooks, electronic didactic materials are specified, approaches toward their construction are studied, principles of their formation are outlined.

Joining of Kazakhstan to Bologna process has actualized a transition from knowledge-enlightenment paradigm of education towards its competence part. Nowadays, a key indicator of the qualification level of a modern specialist is his professional competence that is formed of a set of different competences. In terms of informatization of society, a new component of professional competence of professional education tutors arise – informational-technological competence (ITC) that must form within an institution of higher education [17].

Thus, information technologies of education play as an addition that is used to create new possibilities to transfer knowledge (activity of a pedagogue), perception of knowledge (activity of a student), evaluation of the education quality, and, of course, comprehensive development of a student's personality within the training process. These technologies create the premises for an intensification and openness of the education process: direct feedback, availability of the central data bank,

automatization of the processes of calculative, information-search activity, and also processing results of an experiment; automatization of processes of training activity and management results control.

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The work was submitted to International Scientific Conference «Innovative technologies in the higher and vocational training», Spain (Costa del Azahar), 2-9, August, 2012, came to the editorial office on 25.07.2012.

GENDER ASPECTS OF ADAPTATION OF THE STUDENTS

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This work is devoted to the diagnosis of psycho-physiological aspects of the adaptation of students of Orenburg State University in their first and the last years in the training process. Special attention is paid to gender differences functional state and psycho physiological reactions to the stress of students. Individual peculiarities and mechanisms are studied of the adaptation of students to training activities, as well as the dynamics of the emotional tension in connection with the individual peculiarity in the special conditions of the external environment. A study conducted with the help of the psychological tests with hardware-software complex «Neurosoft».

A person can react in two ways to a stress: he can act aggressively, or he can try to avoid the stress situation. Men are more vulnerable to unfavourable health consequences of stress. Hypertension, aggressive behavior, misuse of alcohol and heavy drugs develops frequently among them. At the same time, women protect themselves against negative consequences of stress. Our work was to define a functional condition and adaptive abilities of students using the available tests that allow us to reveal psychosomatic inclinations. The used psycho-vegetative tests are simple and do not require a lot of time to interpret them. Their repetition is possible too. It important in diagnostic terms and allows us to analyze an efficiency of corrective measures [12]. The special point of studying adaptive process in our study is its investigation in a gender aspect that helps us to work out an optimal tactic in diagnostics and prevention of stress and psychosomatic diseases among students.

58 girls and 64 young men of age from 17 to 21, all students of the 1st and the 5th year of Orenburg State University were studied simultaneously. The groups were distributed as follows: group 1 – girls of the 1st year ($n = 36$), group 2 – girls of the 5th year ($n = 32$), group 3 – young men of the 1st year ($n = 28$), group 4 – young men of the 5th year ($n = 36$). The research took place within the frame of preventive and healthcare programme of OSU: «Individual-differentiation approach in medical-social and psychological-pedagogic education of students for 2012-2017».

Investigation of students was carried out with non-invasive methods and corresponded to ethical standards of Helsinki declaration [11]. All students lived on territory of Orenburg region for 5 and more years, did not have any complaints about their health condition during the investigation and give their informed confirmation to take part in the re-

search. The criterion of exclusion was a student's disease during the experiment.

In order to estimate integral psychophysiological state, we have used computer complex «NS-Psychotest» (LLC «Neurosoft», Russia, Ivanovo). A number of psychophysiological methodics was used:

- eight color test of Luscher, adapted by L. Sobchick in order to provide the color test of relations [10], results of which would be studied as significantly more important and informative than color preference [1] in terms of revelation of a prevailing mood (CO) and energetic balance of a person's organism (vegetative coefficient – VC). Calculations of CO and VC were carried out according to the formulas of A.I. Yuriev and K. Shiposh [13];

- simple sight-motor reaction (SSMR), complex sight-motor reaction (CSMR), reaction towards a moving object (RMO), psychic resistance;
- test of Shultze-Platonov was used to evaluate reaction and attention speed;

- test «physiologic reaction towards stress»;
- test-question list of G. Aizing allowed us to decrease indications of extraversion and personal characteristics of an individual.

The taken analysis has shown a clear dependence of a level of adaptation to educational activity on individual characteristic of a person, such as extraversion-introversion, impulsivity, neurotism, individual physiologic reaction towards stress.

Our research leads us to the suggestion that disturbance in affective psychophysical state are a reflection of the well-known dependence of realization of the highest integrative functions. A greater part in organization of adaptive response belongs to such characteristics as brain workability and mobility of neural processes, emotionality and anxiety. In general they define shapes and psychophysiological adaptation at all stages of adaptive process of students' educational activity.

Resume

1. A common trend has been revealed in color preference of girls – selection of red and orange. It indicates an instinctive aim-directed perception. A reliable preference of yellow was revealed among young men. It points a prevalence of sensual perception in their psychological condition.

2. Preference of bright and intense shades has been displayed in all age groups. It proves the trend of «childhood» perception.

3. A relative increase in initial selection of violet has been registered among young men against a decrease in selection of red. It reflects an emotionally-unstable background of mood that is linked to disturbance in adaptation barrier in relation with continual emotional tension.

4. Adaptation of the majority of 1st-year students to educational process, new social environment goes along with an increase in unproductive tension.

5. In stress situations such characteristics as passiveness, tendency to depend on others, sensitivity are a premise to psychological inclination and

indications of non-adaptation to educational activity of students.

6. In terms of vegetative balance we have registered an ergotropic trend towards activity with prevailing emotions of «attack».

Resume

A gender differentiation in forming individual peculiarities and mechanisms of students' adaptation to educational activity has been registered. The received results testified for the fact that psycho-emotional state of young men was more unstable, and physiological condition of some requires additional monitoring.

The research has been taken with a financial support of Russian Human Scientific Fund and administration of Orenburg region. Regional contest 2012 Ural: Orenburg region, project № 12-16-56002 a/Y: «Development of new interactive-analytic system of monitoring socially-significant diseases and correction of psychosomatic complications that are defined by non-adaptive behavior in a new educational environment of student youth of Orenburg region».

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NEW TECHNOLOGIES IN THE ORGANIZATION OF LABOR TRAINING ACCORDING TO NATIONAL CIRCUMSTANCES

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What is happening in Kazakhstan update curriculum with national and universal values, historical experience of centuries-old cultural traditions of new demands in the preparation of future teachers.

Innovative methods of teaching labor studies, developing the creative taste of understanding of the beautiful, the sublime and the ability to ignore the ugly, it is also important because it is associated with many aspects of the preparation of future teachers: moral education that develops the feeling of love, pride, with labor education, which helps the child to respect the work of the people to see the beauty made. Labor education develops an aesthetic sense, as a pedagogical phenomenon means the systematic and deliberate transmission of the younger generation of scientific knowledge, skills, labor education permeates all spheres of life: and the depth of his thought, and subtlety of feeling nature of the election and installation. Invaluable role of aesthetic education, which is closely associated with labor training in the establishment of the foundations of the future teacher of patriotism, they are imbued with, love to optimally useful work to mother nature, native village, the land, the city are proud of the successful employment of workers. Development of aesthetic taste of the future teachers work training – is the formation of creatively active person, able to perceive, interpret and evaluate the beautiful in nature, useful labor, and public relations from the perspective of the aesthetic ideal, and feel the need of aesthetic activity. Aesthetic taste develops where the creative work is based on the idea of high art and the spiritual perception brings light and joy in the spiritual world, generated by high feelings, thoughts and ideas. In teaching there is no other powerful force for the development of the creative potential of the future teacher labor training as folk art.

One of the necessary conditions for educating young people about the origins of their history and culture is a practical application of the elements of the decorative arts in everyday life. For example, modern costumes, demonstrated at various podiums become more actively complemented by such elements of folk art as decoration, which is the most ancient and basic technique in the art of the steppe tribes. Creativity and art of every nation has a long tradition, whose roots go back thousands of years. Our ancestors had a delicate taste, a kind of concept of beauty and harmony. Dealing with these issues

can be found in various sources: traditional folk art, national color, samples of the surrounding nature, the way people live, their artistic culture, samples of classic and modern arts and crafts. That is, in the Kazakh national costume reflects the ancient traditions associated with their ethnic history, economic, social, and environmental conditions.

Appeal to the national costume, should not be seen only as a desire to keep the tradition, the connection with the long-gone, but as the need to get the creative laboratory of folk art. What makes the originality of the Kazakh national dress? This – embroidery, appliqué and biodiversity.

In world practice, embroidery, made by hand, makes the product not only exclusive, but also incredibly expensive. Kazakh generous fashion to beauty and give almost everyone along the unique open structure. Admirers find tradition of the classic examples of models of Kazakh embroidery. World of fine embroidery, created by Kazakh masters, lives its own life, bewitching, warming the heart. Europe was excited when I first saw samples of this high art. Amazing to see how peacefully our ancestors coexist with the modern fashion of shaped. On the one hand it is – a wholly modern, recognizable folk style, on the other hand it is – a wholly contemporary sound. And these things just want to see the wear and see you in the new wearing world. Many Kazakh national dress decorated with varied patterns. According to scientists – is ancient ornaments, and so they contain elements from the life of nomads and the specific animal. Therefore, the basis for a variety of ornaments craftsmen took the horn sheep, wild sheep, goats, cows, deer, and saiga, struck by their beauty. Ornamental *uzorotvorchestvo* considered to be national traditions embodied in clothes that find their place in modern life. Ornamental art of old phenomenon is a reference for all kinds of Fine Arts, for centuries it has determined the life of the people, was the spiritual heritage of Kazakhs. Decorator Kazakh steppe perfected countless samples of objects inspired by the motifs of flora and fauna. Currently, ornamental art, occupying a leading place in the cultural heritage, is experiencing a rapid revival, enriched by new factors stuffing rich content. Ancient form of ornaments, thereby raising the level of this type of art. Art does not die, does not age art, art – like a tree, and constantly acquires new leaves, flowers and fruits.

Our culture refers to the era of major civil recovery, a time of struggle for national independence, to the heroic themes to folk art.

Appeal to people's costume should not be seen only as a desire to preserve the tradition, the connection with the long-gone, but as the need to get the creative laboratory of folk art. At all stages of development of human culture, in every time and age the best examples of the costume were deeply national. They were created by the artist concentrated penetration into the historical heart and character of his land and his people, and express the essence

of one slave he means. In this regard, the importance of creativity is the source of artistic ideas, the soil that nourishes the imagination of the artist.

Culture of each age uses the achievements of past eras. In order to join any of the cultures of the past, there is no need to renounce the present, move (spiritually) in the past, becoming a man of the past, since this past culture itself was turned to the future, looking for the performance of its ideals not only in the present but and in the distant future.

When creating a modern costume should be based on the following principles:

- Keeping in touch with the best traditions of the past;
- Analytical development of all advanced and progressive;
- A scientific approach to forecasting fashion and costume reflected in achievement in the field of culture, science and industry;
- Costume ensemble decision provides the stylistic unity of man's image of the modern era with the surrounding material environment;

For a person working in the field of costume, for his sense of the most fruitful and instructive are the historical, classical, folk, primitive and industrial products that are not artistic facsimile copy form are not encountered in any other way, but on the contrary, those who say the net «grammatical» speech of nature.

Cultivation of old traditions without the requirements of modern leads to stagnation of contemporary costume from its enclosure achievements of other peoples. Modern national culture can not only be based on repetition, variations of the past. Too much «overtone» in the art of the past leads to formalism. The values of popular culture appear to us only when we feel it complements us and expands our ability to modern experience. Consequently, if the basis for the development of the modern suit to tradition, rather than individual items or decor folk costumes, folk art is to be seen primarily as:

- A source of inspiration, an image or a symbol;
- A philosophy that is analysis of ideas and forms of communication;
- A manifestation of general psychological laws of human perception;
- Detail or decoration as a form of enrichment.

The problem of labor education should be based on the need to create conditions for the development of students' qualities, I suppose people to fulfill themselves in their work. Today it is not easy to organize labor education students. The organization of labor in schools needs an effective support from the government. Needs further development of pedagogical problems of improving the content of the forms and methods of labor studies students, development of labor education according to national circumstances. The use of new technologies in the labor training school is important to note that the educational process is successful, the teacher effectively plan its activities and takes into account the individuality of each child as an individual.

– To develop an artistic vision of the image of a new product and fantasy in the use of decorative elements in the practical development of different types of clothing.

– Learning to use simulation and manufacturing of clothing.

– Implement the scheme «from the idea to the final result».

And in our fleeting century traditions of the people should not be forgotten and we educators must keep them, using all the effort. Creativity of the people has always been closely connected with his employment. For century's perfected decorative – applied art, art acquired complete form, has resulted in a unique style, deeply and vividly portrays the customs, tastes, and inclinations of the people. This is our true national treasure, and each species has its own history and its own peculiarities of development.

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The work was submitted to International Scientific Conference «Modern sociology and education», the United Kingdom (London), October, 20-27, 2012, came to the editorial office on 13.09.2012.

THE PROJECT «THE LABORATORY OF THE PEDAGOGICAL INNOVATION»

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Discription of the project. The scientific novelty and importance of the project consist in the scientific basement and systematic approach to learn and generalization innovative approaches and learning technologies also in their classification at all levels of education (institutions, colleges and schools). Results of the project will have a positive impact on the level of the professional competence of teachers, positive impact on the growth of pedagogical skills in teaching and educating the younger generation of creative and original intellectual citizens of the Republic of Kazakhstan.

The turgency of the project is proved by that now in Kazakhstan there is a formation of the new education system focused on occurrence in world educational space. This process is accompanied by essential changes in the pedagogical theory and practice of teaching and educational process. There is a change of educational processes: the new maintenance, the new approaches, the new relations, the new behaviour, new pedagogical mentality are offered. The formation maintenance is enriched by new remedial abilities, development of abilities to

operate with the information, the creative decision of problems of a science and student teaching with accent on an individualization of educational programs. The role of a pedagogical science in creation of technologies of the training adequate to level of public knowledge increases.

Review of the previous researches, which were conducted in the world, related to the theme and their relations hip with this project. Special professional training of future teachers, which has its origin in the works of A. Disterveg, in the twentieth century developed by scientists L.S. Vygotsky, S.L. Rubinstein, P. Galperin, A.N. Leontiev. Important methodological significance for this project has the work of professional education Abdykarimov B.A., Egorov V.V., Ibyshev E.S., Shkutina L.A., Musalimov T.K., and others. The Essential part in the scientific understanding of a system approach to pedagogical Innovation act in the researches of Galiev T.T., Hansen V.A., Bepalko V.P., Blauberg I.V., Yudin E.G., Kuzmin V.P. and others. However, this process is based on the system approach seizing all levels of modern education is not examined enough. The Problem of the new technology introduction, extensive experience of pedagogical innovations of the experimental schools and innovative teachers constantly demand generalization systematization.

The purpose of the project: the creation of the pedagogical innovation's laboratories for learning and generalization of the pedagogical innovations in the Republic Kazakhstan and in the abroad.

Project methodology: fundamental positions of professional pedagogics about development of professionalism and competence of the pedagogical public, about dialectic unity of the maintenance and training methods, about unity of the theory and practice as criteria of true in the course of knowledge.

Methods of research and ethical questions. To achieve the objectives of the project is proposed to use complex methods of research: methods of theoretical studies (analysis, synthesis, interpretation, comparison, classification, induction, deduction, generalization, etc.), empirical methods (observation, conversations, interviews, questionnaires, the study of documents) statistical methods (quantitative and qualitative analysis of study data).

The realization of the project. On the preparative level: creation the condition for full work of the pedagogical innovation's laboratory (LPI):

1) the development of the target program implementation across the full range scientific research. On the basic realization of the project: Purposeful and productive work of the LPI in accordance with developed program of research by educational innovation;

2) learning and generalization best practices in teaching innovation in educational institutions at various levels (universities, colleges, schools and preschools) in the Republic Kazakhstan and abroad;

3) consultation, methodological and methodical assistance Teachers in the organization investigation by pedagogical innovation;

4) preparation and holding of scientific conferences and seminars on educational innovation;

5) the edition of the text book and monograph on collective pedagogical innovation;

6) preparation and conduct of the contest innovative teachers from various educational institutions (from universities to kindergartens);

7) lighting of the results of research activity LPI in scientific journals;

8) participation of members of the research group in republican, international conferences in the Republic of Kazakhstan and abroad;

9) scientific training project in the research group of domestic and foreign universities;

10) research with students of pedagogical skills to prepare them to use innovative learning technologies, bringing them to attend student conferences and forums; in the final (generalizing and analytical) phase: compilation and analysis of results of scientific:

11) preparation to publications on educational innovation in foreign journals with high impact-factor (IF);

12) generalization of the results of research projects, analysis of the results.

Expecting results: creation of the pedagogic innovation laboratories, studying and generalization pedagogic innovations in RK and abroad, publication by SDW results in learning aids «Innovations in Education» and multi-author book «Development of pedagogic innovation in Republic of Kazakhstan and abroad». *Usage of the scientific results of the Project:* in the educational process of universities, colleges and comprehensive school RK. *Purposeful consumers of the Project results:* educational institution (universities, colleges, schools), institutes of the employee training and education in RK.

The work was submitted to International Scientific Conference «Priorities for Science, Technology and engineering», Egypt, 15-22, August, 2012, came to the editorial office on 28.06.2012.

ON THE ISSUE OF EDUCATIONAL INTERACTIONS IN SCHOOL TEACHING ENVIRONMENT

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The article refers to the pedagogical interactions that form the basis of the educational process at school. It provides a description of the scientific standpoints on the problem of the pedagogical interactions in the educational environment. It also raises the question of readiness for pedagogical interaction. We study such concepts as «environ-

ment», «educational environment», «educational and educative environment».

Due to modernization of the school education and society, social and cultural changes of values, teacher should transform his/her consciousness for reorientation of his/her values. Up-to-date requirements for the teacher are new curricula, widespread use of educational technologies, integration of science and school, and appeal to the international teaching experience.

The changes in social and educational system play a significant role in the molding and making up of the teacher's personality, who must understand all modern social and state requirements. He must realize the fact that his/her professional career will be directly affected by the level of his/her intellect and culture, competence and competitiveness, occupational mobility and the ability to active cooperation and hence the possibility of self-fulfillment.

Every person has to interact with other people in different situations all his/her life. The implementation of certain tasks, the efficiency of his/her actions as a whole, the effective course of his/her life depend on how well this interaction performed. It is natural that in this case the person must take a proactive stance.

Currently, the society has moved to that level of development, where cooperation is the only way for development and progress, because only joint action can help to achieve effective results, while participants of this action are students, teachers, parents and school administration.

In psychological and educational literature, the interaction is understood as a process of direct or indirect influence of participants on each other. «In general, structurally, the interaction is a process that consists of physical contact, the joint movement in space, the joint group or collective action on the one hand, and verbal and nonverbal communication on the other hand» [2, 28].

The interaction is a special aspect of communication, which indicates characteristics of those components of communication, which are related to mutual influence of people on each other, with the immediate organization of joint activities. If there are many immediate participants, it means that everyone should make their own special contribution to this activity. Communicative process, interpersonal communication and collaborative interactions are results of such activity. Sharing knowledge and ideas about joint activities will inevitably involve mutual understanding between the participants, which is carried out due to the new joint efforts to organize and develop a more cooperative interaction. In this case it is important for participants not only to share information but also to exchange their actions and make a plan of them.

The interaction is a part of social activity and it is characterized by both the social relations that are given through this social activity, and interpersonal relations which determine the type of interac-

tion under the given conditions and the degree of its evidence. When the interaction is ineffective, the knowledge transfer is unproductive, and there are conflicts, difficulties in communication, failures that prevent the development of the child [1].

Pedagogical interaction as a process and phenomenon occurs in the educational environment. According to educational research educational environment is defined as «psycho-educational reality, which contains socio-organized conditions for personal development, which are included in the social and spatial-objective environment, and from the point of psychology it consists of the active and communicative acts, and relations between members of the educational process» [3, 57]. These relationships include the exchange of information, educational influences, proper conditions for the motivation and creative learning activities.

The problem of the pedagogical interactions in the modern school teaching environment has become increasingly important. The organization of the interaction of teacher and pupils in the educational environment has a direct impact on the members of the educational process. Individualization of pedagogical interactions becomes more important in a particular educational environment, where the teacher applies these interactions to the state and behavior of the pupil; thus, it shows teacher's openness and sensitivity to external influences, individual characteristics of the child's, its emotional state and motivational tendencies.

Different understanding of the definition of «environment» covered in monographs, dissertations and other scientific works (Jaspers, V. Yasvin, S. Sergeev, etc.). The term «educational environment» has also become widespread (E. Bondarevska, A. Lukin, V. Vesnin, I. Levitsky, L. Konachevska, I. Ulanovska). L. Bueva, Yu. Manuylov, L. Novikova, N. Selivanova, V. Petrivsky, I. Yakimanska, V. Yasvin, etc. studied category of «educational and educative environment». However, while studying the variety of scientific sources, we faced the fact that there is development of certain aspects of pedagogical interactions in domestic pedagogical science on the one hand, and there is no systematic theoretical and methodological basis of relative characteristics of pedagogical interaction in the school teaching environment on the other. Besides, it is necessary to identify the level of teachers' readiness for pedagogical interactions in the educational environment and to develop content, forms and methods of interaction in the educational environment of the school.

Thus, we can see that the phenomenon of interaction has wide practical use on the one hand, and it is difficult to master teacher in the school teaching environment on the other.

That's why modern teacher should have a readiness for pedagogical interactions in the school teaching environment.

Thus, we can say that the pedagogical interaction is formed due to teachers' theoretical, methodological and technological fundamentals, and it influences the formation of professional and personal capacities and abilities of the teacher. The teacher enriches the psychological and pedagogical knowledge, develops the creative pedagogical thinking. The teacher, who not only participates in the process of learning and transmitting information, and, above all, interact in the educational process, master psychological and educational terminology and language of science, learn appropriate self-assessment of his/her educational opportunities and skills (organizational, communication, therapeutic, rehabilitative and constructive, gnostic). He/she has the ability to use knowledge of pedagogy, psychology, educational technology in their practice, and most importantly – to determine the prospects for personal growth of its students in a particular educational area.

Pedagogical interaction involves the conversion of the teacher in dominant position and pupil in the subordinate position to person-equal position. This conversion is connected with the fact that the teacher not only teaches and educates but also motivates, encourages students to develop, create conditions for self-development path.

Mastering the theory of pedagogical interaction and its basics, the teacher can and should use its potential for his/her own personal and professional growth in the future.

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The work was submitted to International Scientific Conference «Prospects for the development of university science», Russia (Sochi), September 27 - October 1, 2012, came to the editorial office on 19.07.2012.

*Short Reports***THE PROBLEM OF EDUCATIONAL INTERACTIONS IN THE HISTORY OF EDUCATION**

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The changes in social and educational system play a significant role in the molding and making up of the teacher's personality, who must understand all modern social and state requirements. He must realize the fact that his/her professional career will be directly affected by the level of his/her intellect and culture, competence and competitiveness, occupational mobility and the ability to active cooperation and hence the possibility of self-fulfillment.

Every person has to interact with other people in different situations all his/her life. The implementation of certain tasks, the efficiency of his/her actions as a whole, the effective course of his/her life depend on how well this interaction performed. It is natural that in this case the person must take a proactive stance.

Currently, the society has moved to that level of development, where cooperation is the only way for development and progress, because only joint action can help to achieve effective results, while participants of this action are students, teachers, parents and school administration.

In psychological and educational literature, the interaction is understood as a process of direct or indirect influence of participants on each other. «In general, structurally, the interaction is a process that consists of physical contact, the joint movement in space, the joint group or collective action on the one hand, and verbal and nonverbal communication on the other hand» [2, 28].

The interaction is a special aspect of communication, which indicates characteristics of those components of communication, which are related to mutual influence of people on each other, with the immediate organization of joint activities. If there are many immediate participants, it means that everyone should make their own special contribution to this activity. Communicative process, interpersonal communication and collaborative interactions are results of such activity. Sharing knowledge and ideas about joint activities will inevitably involve mutual understanding between the participants, which is carried out due to the new joint efforts to organize and develop a more cooperative interaction. In this case it is important for participants not only to share information but also to exchange their actions and make a plan of them.

The interaction is a part of social activity and it is characterized by both the social relations that are given through this social activity, and interpersonal relations which determine the type of interaction under the given conditions and the degree of its evidence. When the interaction is ineffective, the knowledge transfer is unproductive, and there are conflicts, difficulties in communication, failures that prevent the development of the child [1].

Pedagogical interaction as a process and phenomenon occurs in the educational environment. According to educational research educational environment is defined as «psycho-educational reality, which contains socio-organized conditions for personal development, which are included in the social and spatial-objective environment, and from the point of psychology it consists of the active and communicative acts, and relations between members of the educational process» [3, 57]. These relationships include the exchange of information, educational influences, proper conditions for the motivation and creative learning activities.

The problem of the pedagogical interactions in the modern school educational environment has become increasingly important. The organization of the interaction of teacher and pupils in the educational environment has a direct impact on the members of the educational process.

Different understanding of the definition of «environment» covered in monographs, dissertations and other scientific works (Jaspers, V. Yasvin, S. Sergeev, etc.). The term «educational environment» has become widespread (E. Bondarevskaya, A. Lukin) as well as term «educational and educative environment» (L. Bueva, Yu. Manuylov, L. Novikova, N. Selivanova, V. Petrivsky, I. Yakimanska, etc.)

In this connection, we should pay attention to the teaching experience of the famous American educator and philosopher John Dewey. In the early 20th century this well-known American educator and philosopher determined that the task of pedagogy is to help people in shaping their strategy and create their means by which they will realize their goals. At the same time, Dewey believed that the skill of the teacher is not to violate the personal experience of the individual. When the teacher controls the individual too much, he seems to be quietly implanting his own experience in the mind of the individual. Therefore, Dewey demanded a minimum of meddling and control from others in respect of personal experience of each person. He believed that it is necessary to make the personal experience of the individual not contradicting to the experience of others. And he also believed that the progressive

society should focus on initiative and activity of citizens in a democratic society [4].

According to Dewey the process of learning in «educational environment» is carried out with a certain purpose and it becomes effective if this environment has three major functions:

1) it simplifies and organizes the results, goals – necessary skills, knowledge, attainments, excellence and abilities;

2) it clarifies and idealizes the existing social system;

3) it creates a wider and better balanced environment than that where a young would have been on his/her own.

Thus, the learning influence is inherent in the «educational environment». A primary task of the school is to train children to cooperation and mutual assistance, to develop their awareness of interdependence, to help children to practice the social behavior; and subsidiary goals: to develop their motivation, labor skills and abilities.

Today Dewey's ideas are relevant in modern pedagogy. This is connected with the fact that the formation of active and motivated citizens who will build a democratic society is only possible if since high school teachers and students will create such an educational and educative environment in which relationships are built not on the impact of the authoritarian teacher to student, but on the active interaction between teacher and students.

These classical ideas of D. Dewey can be transferred to the current time. While shaping education and educational environment, modern teacher should be guided by the ideas of classical pedagogues of the interaction with children, he should have comprehensive information on cooperation technologies, be ready to the pedagogical interactions.

We can see that on the one hand, the phenomenon of interaction has wide practical use, on the other – it is difficult to master in the school educational environment.

Thus, we can see that the phenomenon of interaction has wide practical use on the one hand, and it is difficult to master teacher in the school educational environment on the other.

That's why modern teacher should have a readiness for pedagogical interactions in the school educational environment.

Thus, we can say that the pedagogical interaction is formed due to teachers' theoretical, methodological and technological fundamentals, and it in-

fluences the formation of professional and personal capacities and abilities of the teacher. The teacher enriches the psychological and pedagogical knowledge, develops the creative pedagogical thinking. The teacher, who not only participates in the process of learning and transmitting information, and, above all, interact in the educational process, master psychological and educational terminology and language of science, learn appropriate self-assessment of his/her educational opportunities and skills (organizational, communication, therapeutic, rehabilitative and constructive, gnostic). He/she has the ability to use knowledge of pedagogy, psychology, educational technology in their practice, and most importantly – to determine the prospects for personal growth of its students in a particular educational area, teach them to interact actively, to be full of initiative and motivation.

Pedagogical interaction involves the conversion of the teacher in dominant position and pupil in the subordinate position to person-equal position. This conversion is connected with the fact that the teacher not only teaches and educates but also motivates, encourages students to develop, create conditions for self-development path.

The ideas of classical pedagogues (Dewey) can help a modern teacher be not only the most active builder of a democratic society, but also to teach his students to do the same.

Mastering the theory of pedagogical interaction and its basics, the teacher can and should use its potential for his/her own personal and professional growth in the future.

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DOCUMENTATION ENHANCEMENT IN CASE OF CARRYING OUT PERSONNEL AUDIT AND CONSULTING

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In article the main aspects of documentation are considered in case of carrying out personnel audit. For the purpose of enhancement of documentation of personnel audit in auditing organization it is offered to develop an internal standard «Documentation of personnel audit». The main requirements to contents of working documentation of personnel audit are offered.

Keywords: personnel audit, consulting, documentation of personnel, auditing organization

Personnel audit represents the separate direction in system of audit, being other, connected with auditor activities, service.

The concept «auditor's report» in case of carrying out personnel audit isn't applied, as it belongs to regular audit and characterizes the document absolutely other plan and appointment. The auditor's report is the official document intended for users of the financial (accounting) reporting of audited persons, constituted according to the current legislation and containing the opinion of auditing organization expressed in the established form on reliability in all essential relations of the financial (accounting) reporting of the audited person and compliance of an order of maintaining by it financial accounting to the legislation of the Russian Federation.

The stage of registration and representation of results of carrying out personnel audit and development of recommendations about results performed is finishing.

The main stages of preparation of the report on results of personnel audit, on our opinion, are:

1. Registration of audit documents in case of carrying out personnel audit.
2. The analysis of collected actual data on the basis of final working documents and preparation of the conclusions and conclusions.
3. Preparation of recommendations.
4. Acquaintance of a management of the organization with results of check.

The most important stage is the first stage – registration of audit documents in case of carrying out personnel audit.

Documentation of personnel audit allows to analyze actions of auditors and, therefore, to organize both internal corporate, and external control of quality of their work. Besides, on the basis of working documentation the auditing organization can defend the interests in court in case of customer complaints concerning low quality of the audit services.

The federal rule (standard) of auditor activities «Audit documentation», approved by the Order of the Government of the Russian Federation from 23.09.2002 № 696, estab-

lishes only general requirements to documentation creation in the course of audit. Thus, auditing organizations must develop a specific technique of documentation of process of carrying out audit inspection in internal corporate standards.

For the purpose of enhancement of documentation of personnel audit of auditing organization it is reasonable to approve own intra corporate standard of auditor activities «Documentation of personnel audit».

It is represented to us that the standardization system in methodical ensuring process of personnel audit allows to regulate accomplishment of audit procedures, since preliminary customer research and finishing registration of the audit report, and also to provide proper quality of activities of auditing firm.

The internal corporate standard shall be constituted on the basis of the International standard of auditor activities (further – MSA) 230th «Documentation» and the Rule (standard) of auditor activities № 2 «Audit documentation», approved by the Order of the Government of the Russian Federation from 23.09.2006 № 696, which contain the requirement about need of registration by the auditor of the data being important from the point of view of forming of proofs, confirming auditor opinion, and also proofs of that audit was carried out according to standards of auditor activities.

Establishment of single requirements and creation of recommendations about maintaining documentation in the course of personnel audit and consulting shall become the purpose of the Standard. Also:

- formulation of general principles of documentation of personnel audit;
- approval of the requirements shown to form and content of working documentation of audit;
- establishment of an order of creation and storage of working documentation.

The term «documentation» is treated in MSA 230 as the materials (working documents) constituted by auditors and for the auditor or received and stored by auditors in connection with carrying out audit.

Working documents are records in which the auditor fixes the used procedures, tests, the acquired information and the corresponding conclusions made during audit. They include information which the auditor considers important check for the correct accomplishment and which can support the conclusions given by it in its audit opinion. Working documents allow the auditor to be sure sufficiently that it books audit according to accepted standards.

The auditing organization shall arrange documentary all information which is important from the point of view of provision of the proofs confirming auditor opinion which is important for provision of proofs in reasons for the report on results of personnel audit, and also confirms that personnel audit were is executed according to operating with federal rules (standards) of auditor activities. In working documents the auditor fix made decisions and results of the work done by it at all stages of tax audit.

Working documents must be constituted and systematized so that to reflect feature of each specific check.

For the purpose of increase of efficiency of preparation and verification of working documents it is reasonable to develop documentation forms (for example, standard structure of the file (folder) of working documents, forms, questionnaires, standard letters and addresses, etc.), and also system of creation and an order of assignment of identification numbers to the documents which are a part of working documentation.

Each document, as a rule, must include the following:

- the name of the document and its identification number;
- the name of the checked organization;
- the checked period;
- contents of the document;
- references to sources of the data included in its content;
- the position and the personal signature of the person which has prepared this document.

Such standardization of documentation gives the chance to the auditor to inspect more organized and is high-quality, and it is reliable to head of check to supervise results of work performed by them.

For ensuring reasonable confidence of quality of the rendered services the file with documents on carrying out tax audit, can contain the following working documents developed by the author:

- the document «Acceptance on servicing of the new client or continued cooperation»;
- an agreement copy on rendering of auditor services;
- document «Completing of auditing group»;

- copy of the order on appointment of the head of a task and specialists;

- the document «Independence of the specialist of auditing organization » if it is required by the contract provision;

- program of carrying out personnel audit;

- original letters, the requests sent to the client or received from the client;

- the other documents confirming information, specified in the written report about results of provision of services accompanying audit or confirmatory amount and content of the provided services.

Working documentation shall contain the summary with the index and cross references on documents. All confirmatory information (including, electronically) shall have, if necessary, system of cross references on the corresponding working documentation, and also on the program of tax audit. It allows to avoid permanent review of information on all file (folder) and provides ease of access to all information concerning carrying out audit of efficiency.

Such standardization of documentation gives the chance to the auditor to inspect is more organized and is high-quality, and it is reliable to head of check to supervise results of work performed by them.

Working documents can be provided in a type of data, fixed on paper, a film, in electronic form or in other form.

In an internal standard of auditing organization it is recommended to fix requirements to contents of working documentation of personnel audit, for example:

1. Working documentation of personnel audit shall contain the data necessary and sufficient for:

- creation of the report on results of personnel audit;

- confirmations of conformity of actually carried out audit procedures to the program of their carrying out;

- control over carrying out personnel audit.

2. Working documentation of personnel audit shall contain:

- records about planned content, time and amount of audit procedures;

- records about the actual content, time and amount of accomplishment of audit procedures;

- identification signs of documents considered by the auditor (for example, for orders for the bought goods it there can be a date and an order number);

- the description the auditor of the procedure used in case of check (the auditor, carrying out selective check and describing tested set, can bring in the working documents of the characteristic of amount of procedure and

identify set (for example to specify that all journal records are included in it from the corresponding register on the amount over a certain level));

- dates of carrying out discussions, names and positions of the interrogated personnel – in protocols or records of the carried-out discussions with the personnel of the client;

- records of the supervision which have been carried out by the auditor (creation of working documents with the process description which the auditor watches, personnel participating in this process, its obligations, and also when and where supervision was carried out).

- the preliminary and final conclusions made on the basis of data received during audit procedures.

3. All essential data reflecting content, time and amount of audit procedures, are subject to reflection in working documentation together with the conclusions made on their basis.

4. The data reflected in working documentation, shall be complete and detailed if necessary on the basis of the specified data it was possible to establish without effort the actual content, time and amount of audit procedures.

5. The data reflected in working documentation, shall be stated clearly and unequivocally.

In an internal standard it is necessary to fix that auditor documentation shall contain information on all vital issues arising during audit, and results of their consideration. In particular, vital issues treat:

- questions which lead to significant risks;
- the results of audit procedures specifying that financial information can be essentially distorted, or on need of review by the auditor of the previous risks assessment of essential

misstatement and the corresponding actions of the auditor;

- circumstances which deliver to the auditor of difficulty in application of necessary audit procedures;

- results of procedures which can entail modification of audit opinion.

Thus the auditor can prepare and keep summarizing report as a part of auditor documentation. In it describe the vital issues revealed during audit, an order and result of their decision, or give cross references on pertinent auditor documentation where such information is reflected.

With a management of the audited person and other persons the auditor shall document discussion of vital issues timely in a report type with indication of date and the persons participating in discussion. It can be not only the records prepared by the auditor, but also other corresponding records, for example the protocols of meetings prepared by the personnel of the audited person.

In case of identification in the course of audit inspection of inconsistent information or information which doesn't correspond to conclusions of the auditor of rather vital issue, it should be noted influence of these data on audit opinion.

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SOCIALLY ORIENTED FORESIGHT AS AN INNOVATIVE TOOL IN THE PROCESS OF MODERNIZATION OF RUSSIAN BUSINESS STRUCTURES

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Citizen participation in the development of the regional development strategy, the city has become the norm in the practice of modern management. In this regard, the research interest is technology foresight, which is increasingly used in social engineering. The article explains the need for socially oriented foresight as an innovative tool in the process of modernization of Russian business structures.

Keywords: socially oriented foresight, scientific and technological foresight, innovation system, government regulation of innovation policy in Russia, the modernization of business structures

Urgency of the study's topic. Gradual transition of the Russian economy to the innovation development model under the improvement strategy is intended to ensure stable and long-term development of socioeconomic processes in the sphere of production industry companies. The development mechanisms have different directions of impact due to transformation processes in the Russian economy and their peculiarity under the space organization of the economy of some state-run and private industrial enterprises. Traditional methods for management of socioeconomic development of industrial companies demonstrate their inefficiency under sharp structural changes due to transition to the market economic system and intensified competition for innovation development resources and cause the necessity to develop new tools mainly intended to ensure improvement processes.

Such situation causes the necessity to scientifically ground methodology approaches to creating socially oriented foresight as an innovation tool for improvement processes within industrial companies through their adaptation to the innovation development model.

The study's **subject** is socially oriented foresight as an innovation tool for improvement processes within industrial companies.

The study's **objective** is to ground scientific and methodological recommendations on creating an improvement mechanism for businesses on the basis of socially oriented foresight.

The research results and their discussion. In 2010, Russia's Ministry of Economic Development And Trade released a renewed Strategy of Innovation Development Till 2020, or Strategy 2020, which documented the course chosen by the Government. According to the Strategy, in 10 years Russia will be able to cover 10% of the global intellectual service market, while the share of the innovation sector in the national GDP will increase up to 20% [1].

Socially oriented foresight might be considered as one of the innovation tools for improvement of Russian businesses. Develop-

ment of foresight should consider peculiarities of each country as a study successfully held in one country can fail in the other one. It is necessary to develop the study methods taking into account possibilities and needs of Russia.

The foresight's objective is to define strategic lines of studies and researches, which can result in the most socioeconomic advantages, through working out of development scenarios, reaching a consensus on a preferable scenario choice and taking measures for its implementation. Among the most effectively used foresight methods are the Delphi method, critical technologies, scenario development, technology road maps and expert panel development [2].

The history of foresight studies in Russia extends back about 15 years. During this period, different institutions, organizations and research teams implemented projects aimed to define development prospects of various sci-tech lines, economy sectors, regions, etc. This proves that authorities and scientific community are not indifferent to problems and prospects of the development in science, technology and innovations, as well as to issues of foresight studies and their implementation in the Russian reality [3].

Areas of foresight's application are diverse. Some projects cover almost all spheres of science and sectors of the economy in the national scale. Other projects are focused on local technology and research aspects, a certain economy sector or social problem. The scope of a foresight project is primarily determined by the investor's interest and sphere of his activity. At present, the following trend is observed: foresight is actively implemented at the level of particular Russia's regions. These local projects can last from several months to several years [4].

Introduction of foresight in the world is associated with the Delphi method, which was developed by the RAND Corporation and used for forecasting. It is considered one of the key foresight methods. Some foreign and Russian scholars support this hypothesis.

If foresight is associated with the implementation of the Delphi method (UNIDO P. 10) developed by the RAND Corporation, it is over 60 years old then. Some technology foresight methods were used in defence researches in the 1950s. Then this tool was adopted by the economy, social sphere and politics from the defence sphere and the field of corporate secrets. Since then, the first stage of the foresight era started. It gained popularity. Some countries even try to demonstrate their attention to foresight: «In the 1990s, governments of the USA, Great Britain, Germany, Japan and Australia started using foresight actively. In the beginning of the 2000s, the number of countries implementing it exceeded 30. At present, not only Western Europe, Japan and the USA, but also some developing countries and countries in transition: new EU members like Hungary, Czech Republic and Poland, use foresight» [5].

At the second stage, when more attention was paid to the development of socially oriented foresight, which estimated social and cultural consequences of introduction and implementation of technologies like impact of the Internet on family or political institutions and labor management, the word 'technology' was used rarer. Finally, foresight began focusing on problems unsolvable for a country. Technology forecast was used to consider such problems as hunger, poverty, safety, etc. During the transition to the third stage, foresight turned into a technology of elite negotiations, a way to reach a consensus on the future in the society.

At present, at the third stage of the development, foresight is used as a system tool for impact on the formation of the future, which enables considering possible changes in all spheres of public activity: science, technologies, economy, social and public relations and

culture. Necessity for foresight is determined now by the following factors:

- intensified competition;
 - limited state financing;
 - increased complexity and enhanced role of scientific and technological competence.
- Foresight is intended to:
- improve the decision making process;
 - control technology choice;
 - create alternative lines for the future development;
 - strengthen the training process and enhance the readiness to act under unforeseen circumstances;
 - stimulate changes.

Creation of long-term forecasts and development programs is a requirement for the development of the innovation economy of both companies and the country.

Theoretical and practical value of the study: it contributes to the development of the foresight theory implementation at the level of an organization and enables better understanding of the notion and essence of socially oriented foresight and its role in enhancing the company's competitiveness, as well as more accurate grounding of lines of the business entity's innovation strategy development.

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TOURISM IN THE REPUBLIC OF KAZAKHSTAN: CURRENT STATE AND PROSPECTS OF THE DEVELOPMENT

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In the article analyzed the development of the tourism industry in the Republic of Kazakhstan. The factors which are necessary for the functioning of the country's modern high-performance and competitive tourist complex providing opportunities for meeting the needs of local and foreign nationals in a variety of tourist services were identified. The conditions for attracting the investment for the development of material base of the tourism industry in the Republic of Kazakhstan were allocated; also the prospects directions of the development of tourism in the country have been identified.

Keywords: tourism, investment, economy, potential, market, information, culture, competitive, industry, a pilot project

Tourism in the Republic of Kazakhstan is a priority. The main purpose of tourism development in Kazakhstan is the creation of a modern highly efficient and competitive tourist complex on the basis of which will be provided the conditions for the development of the industry as a sector of the economy, integration into the global tourism market and the development of further international cooperation in the field of tourism. Given that Kazakhstan has a unique natural potential, the country has all opportunities for the development of different types of tourism.

As noted by international experts in the field of tourism, the state of tourism industry development in Kazakhstan in recent years is characterized by its progressive and sustainable development. In the coming years our country has the opportunity to become one of the largest economies in the travel and tourism. Abroad are beginning to consider Kazakhstan as one of the most stable countries with unique tourism opportunities.

Tourism is defined by one of the major clusters of non-oil sector of the economy by the President of Kazakhstan. The republic set demanding task in the near future to enter the top 50 most competitive countries in the world. It is important to understand today – Kazakhstan's tourist complex can be a powerful lever for accelerating the pace of overall growth and modernization of the economy. These are evidenced by growth trends in inbound and domestic tourism and create a system of state regulation of tourism activities in the framework of tourism development. Significantly increased the number of foreign tourists has increased the demand for travel within the country.

According to the Statistical Agency, in Kazakhstan in 2010, registered travel agencies in 1252. Of those in the public domain is a travel company and the remainder in private ownership and enterprises with foreign participation (Table) [1, p. 37].

As the table shows, there is a positive growth of tourism firms. Compared with 2006,

in 2010 the number had increased by 36%. The greatest numbers of firms are located in Almaty, Astana, Karaganda, Pavlodar and East Kazakhstan regions. A small number of tourist firms observed in the Kyzylorda region.

By definition of WTO, countries are divided into: the «countries that are in the first place, troop-tourists» and «countries in the first place, receiving tourists».

Kazakhstan on the gradation of the country belongs to the supplier of tourists. In world practice, supplier countries are highly developed country with an enormous industrial potential. Kazakhstan on many economic parameters is this country, and should try to attract tourists to the country in order to ensure the inflow of capital. The prevalence of outbound tourism in the early years of reform was associated with a decline in production in light industry, breaking the traditional relations, which led to the impoverishment of the consumer goods market and caused a «boom» shop-tourism. Dramatically increased the number of travelers to tourist trips resulting in significant tourist traffic was not in favor for Kazakhstan. Recently, with increasing incomes, the share of domestic tourism was increased.

According to the Statistical Agency of the Republic of Kazakhstan in 2010, the number of visitors served by tourist firms totaled 459,337, an increase compared to the year 2009 by 32% (in 2009 – 347,413 people). There has been an increase in tourist traffic served by tourist firms of inbound and outbound travel:

- number of tourists traveling through the territory of the Republic of Kazakhstan, has increased by 29% compared with 2009 and amounted to 157,986 persons;

- number of visitors inbound tourism increased by 27% compared with 2009 and amounted to 39,640 persons;

- number of visitors to outbound tourism increased by 35% to 261 709 people [1, p. 31].

According to the international financial institutions, tourism during the second half of

XX century confidently holds the leading position in terms of gross annual financial turnover of the global market. There is enough evidence

to suggest that, at certain periods, depending on market fluctuations, there may be a situation of absolute leadership of the tourism industry.

The number of tourist companies by the regions of the Republic of Kazakhstan for the period 2006–2010 years

Regions of Kazakhstan	Years				
	2006	2007	2008	2009	2010
Akmolinskaya	17	20	26	26	22
Aktubinskaya	18	20	27	26	27
Almatinskaya	50	47	54	43	37
Atyrauskaya	23	24	25	18	21
Zapadno-Kazakhstanskaya	8	10	11	10	13
Zhambylskaya	13	19	21	21	19
Karagandinskaya	52	54	72	76	81
Kostanaiskaya	13	19	26	26	27
Kyzylordinskaya	4	4	3	2	4
Mangistauskaya	21	22	26	29	30
Yuzhno-Kazakhstanskaya	18	18	26	22	27
Pavlodarskaya	32	48	52	56	59
Severo-Kazakhstanskaya	16	18	20	23	21
Vostochno-Kazakhstanskaya	39	40	47	48	42
Astana city	44	57	88	87	158
Almaty city	553	587	639	690	664
Republic of Kazakhstan, total	921	1007	1163	1203	1252

Note. Compiled by author based on data from the Statistical Agency of the Republic of Kazakhstan.

The leading position of tourism, due to processes of economic globalization, the rapid development of aviation and transport, media, computing and advertising industry, the liberalization of visa regimes, rising living standards and the degree of informative of the population in developed economies, the emergence in the world of new centers of economic breakthrough irreversible process of internationalization of the criteria defining the key concepts of human values.

The initiating factor in the rapid development of tourism was also negative environmental impacts of industrialization and urbanization of the society, encouraging people to seek for rest and rehabilitation of health eco-friendly places abroad. Geography and species composition of international tourism are in the state, mostly stable, positive centrifugal dynamics, resulting in the emergence of new centers and the tourist industry while maintaining the traditional popularity.

Becoming increasingly popular trip, providing an opportunity to meet in professions or interests, travels of the fans on the international sports competitions, and participate in carnivals, national holidays and festivities of the local population (especially – the indige-

nous peoples). But along with these processes is gaining a pilgrim tourism. The number of pilgrims and just want to get acquainted with the culture of other nations is growing. This is especially important today, given the ethnic conflicts on religious grounds. Now began to appear, some encouraging signs that allow being optimistic about the future of Kazakhstan's tourism in general, and pilgrim aging tourism in particular. A good sign of close government attention to the high economic potential of tourism, was the message of President to the people of Kazakhstan «Kazakhstan 2030» (long-term priority «Economic growth based on an advanced market economy with high levels of foreign investment»), as well as the annual message of the President of the Republic of Kazakhstan.

Recently, interest to the Kazakhstan as a tourist destination, has increased significantly worldwide, and thus, year by year the range of tourist services offered by local tour operators to attract more travelers. Today we attract tourists from Kazakhstan, Germany, England, Japan, Korea and China. The Germans and the British had already explored tourist destinations in Kazakhstan. Today, Kazakhstan has almost all the existing forms of tourism – cog-

nitive, entertaining, pilgrim, ecological, and others. Tourists invited to a large number of routes of travel throughout the territory of Kazakhstan. Kazakhstan is a huge country, which has a unique natural potential, unique culture and art. Many Kazakh resorts for many years been abandoned, dilapidated, and therefore of little interest, not only foreigners, but fellow citizens. They turned their attention, in fact, quite recently, and we can not say that all problems have been solved manifested.

Today in the republic has over a thousand travel agencies and operators. But most of them focused not on domestic and inbound tourism, they work with abroad travels.

During the 2007–2010 development of the industry based on the State Program of development of tourist industry of the Republic of Kazakhstan for 2007–2011, approved by Decree of the Head of State on December 29, 2006 № 231 [2].

During this period, work was carried out to improve the regulatory framework. In 2008 changes were made to some legislative acts on tourist activities and approved by the orders of the Ministry of Tourism and Sports of the Republic of Kazakhstan, which from January 20, 2012 Presidential Decree «On further improvement of the system of government of the Republic of Kazakhstan» was reorganized into the Agency for Sports and Physical Education (hereinafter – the Agency) on tourism [3].

It should be noted that the Agency on an ongoing basis, work on the formation of the image, including the promotion of tourism information of Kazakhstan abroad. The main tools are the creation and broadcasting of promotional videos on leading TV channels of the world, conducting information tours for representatives of leading international media, participation in major international tourism fairs.

The main event in a certain image in 2009 was held in Astana in October 2009 – the 18th session of the General Assembly of the World Tourism Organization (UNWTO), which brought together over 700 delegates from 146 countries, the actual members of the UNWTO, as well as representatives of foreign world media.

At the end of the UNWTO General Assembly adopted important documents of strategic importance to the world of tourism:

1. Astana Declaration on development of tourism on the Silk Road.

2. The Support of the initiative of the President of the Republic of Kazakhstan – Nursultan Nazarbayev – to declare an August 29 – the World Day of free of nuclear weapons.

Result of these measures, about Kazakhstan, finally talked about as a country with

huge potential for tourism, unique nature and rich historical and cultural heritage.

In order to identify major problems and causes hindering the development of tourism on the ground, during June 2008 to July 2009 were carried out research of the Korean International Cooperation Agency in December 2009, developed a master plan of «Creation of a national tourism cluster along the international highway «Western Europe – Western China»» [4].

The recommendations of the Master Plan provided the basis for the formation of further vision for the development of tourism in the State program of forced industrial-innovative development of Kazakhstan for 2010–2014.

Despite of the fact that there has been a steady trend of growth, mainly placements are located in cities and large towns. To create favorable conditions for tourists, not only foreign but also domestic, given the long distances between settlements, it is important to their location along highways in certain areas.

However, the absence of the accommodation directly to the places where the tourist facilities and tourist routes in the nodal points prevents the development of inbound and domestic tourism of mass. As a result, domestic tourism is dominated by one-day routes with a length of 400–500 km, indicating a significant amount of time spent on the road. Such trips are boring and leave the bad memories for most travelers.

Another of the problems to be solved is the fact that the global financial crisis, domestic investors will not risk further invest in the construction of tourist facilities.

Creating a mechanism for long-term lending preferences of the tourism organizations for the development of tourism infrastructure helps for the increasing the investments for the development a competitive tourism industry.

In countries that make a bet on the development of tourism, usually taken legislative measures to encourage the development of tourism infrastructure, particularly hotels. At the same time government agencies and financial institutions based on the fact that investment in tourism is creating new jobs and generates some income. Therefore, in most legislative decisions are taken to facilitate the attraction of foreign and domestic investments and loans, for example by establishing for them tax breaks.

The target group of tourists with an interest in Kazakhstan:

- 1) lovers of wild unspoiled nature and amazing landscapes;

- 2) fans unexplored tourist destinations, curious tourists who want to be pioneers.

Ecological tourism in Kazakhstan has good potential, but not sufficiently developed.

The state program of tourism development for 2007–2011, ecotourism was highlighted as one of the priorities, and provided for the development of national, regional and local policies for its development. However, to date has not yet formed as the policy itself, as well as common organizational approaches.

Ecotourism is not aimed at increasing tourist flows to natural areas; it allows you to preserve nature, which does not require the implementation of investment projects that can have a negative impact on the environment.

In Kazakhstan there are 118 protected areas, including 11 state national parks, which allowed the use of controlled tourism, aimed at the development of ecotourism. Given that its objects can be both natural and cultural attractions, natural and natural-anthropogenic landscapes, where traditional culture is integral with the natural environment, the development of eco-tourism can provide not only financial support for natural areas, but also give the opportunity to create interest in their preservation.

Rural Ecotourism also has the potential for developing. Its development is limited to rural areas and due to the activity for the production of agricultural products.

As part of this form of tourism in Kazakhstan have developed guest houses, living in which tourists are rural way of life, become familiar with everyday of the Kazakh culture and natural attractions.

Since 2005, the Information Resource Center operates the Ecological Tourism in Almaty, who works for the creation and development of these guest houses. These homes are part of the concept of ecological and sustainable tourism in the Republic of Kazakhstan.

The study of international experience on the subject shows that the socio-economic role of ecotourism in different areas with different functions. In the agricultural areas of ecotourism can be an additional source of income for sustains production, landscape and traditional way of life of local people. In the territories, the main function is to protect the natural and cultural heritage; eco-tourism is a major source of revenue, cost-justifying the execution of this function. In industrial areas, the role of ecotourism is to protect natural areas unchanged and maintaining physical and mental equilibrium of the population.

In general, the potential interest in ecotourism in the international market is 8,9 million (or 63% of total capacity). This tourism product is the best position in the global tourism market and has become one of the key developments in Kazakhstan.

Kazakhstan has an ancient and unique history, as evidenced by the presence of twenty-seven thousand ancient monuments such as Saki mounds / hills, the Golden Man of Issyk, and many others.

Kazakh section of the Silk Road is a unique complex of historical monuments, archeology, architecture, urban planning and monumental art. They are the ancient cities of Otrar, Taraz, Sairam (Ispidzhab), Turkestan (Iasi), Balasagun and others who were not just shopping centers but also centers of science and culture.

All of this should contribute for the effective development of cultural tourism, but considering the dependence on the sector on many factors, such as a lack of advertising and information materials, poor infrastructure, including small number of placements near the tourist facilities, poor quality of roads, there is its low competitiveness.

With its unique natural and mineral resources and climate, Kazakhstan could also develop a medical spa and ski tourism.

The market situation for the provision and development of therapeutic services is changing towards a quantitative increase in business tourism and recreational areas.

Analysis of the status of this issue shows that since 1999, begins a gradual rise and development of sanatoriums and recreation organizations, whose number grew to 121 by end of 2010.

The study of international experience in this highly topical issue in Kazakhstan indicates that the leadership of tourist arrivals to the spa treatment, thanks to the Czech Republic belongs to the largest and the world famous health resort of Karlovy Vary. According to the National Tourism Administration of the Czech Republic every year it is visited by about 50 thousand people from more than 70 countries for the treatment and about 2 million tourists in recreational and fitness purposes.

Switzerland is a country in the last decade, the popular ski tourism, which generates revenues of up to U.S. \$ 20 billion. The same type of tourism was developed in Italy and France, who are actively using high – Alps, Austria, Slovenia and Montenegro. Plans to enhance the development of tourism destinations, such countries as Bulgaria and Turkey.

For Kazakhstan, the development of ski tourism is of high importance; its development in some regions can be the basis of socio-economic development.

The unique natural conditions make it possible to create a large modern ski centers with a high level of comfort and services.

The development of all of types of tourism will contribute for the economic stability and profitability of tourist and recreational

complex, conservation and sustainable use of valuable natural medicinal resources of the country, improve the provision of tourist and recreational services, creating conditions for the formation and development of a competitive tourism industry in the country.

Despite of the development of tourism infrastructure, quality of service at many tourist sites remained low. This is due to the fact that the implementation of measures to improve the system of training for the tourism industry takes time.

July 5, 2008, the Law of the Republic of Kazakhstan «On making amendments and addenda to some legislative acts of the Republic of Kazakhstan on issues of tourist activities» was adopted.

As part of this law established the regulatory framework to ensure that employers have a real opportunity with the formation of associations and organizations to introduce vocational training, retraining and skills they need tourist staff.

An important issue is the introduction of higher educational institutions (hereinafter – institutions of higher education) of the country, preparing personnel for the tourism industry of the quality of tourism education «WTO-Ted-Qual», recommended by the World Tourism Organization.

For this purpose, together with experts from the UNWTO and the Ministry of Education and Science continues to investigate the issue of a pilot project to introduce the system of certification based on one of the leading public institutions of higher education in Kazakhstan.

Kazakhstan plans to become a center of tourism in the region, it is necessary to take measures to improve the system of training in the tourism industry, where the impact is particularly acute shortage of qualified professionals in middle and senior managers in demand in the tertiary sector.

Agency with the participation of business associations, employers, and managers of higher, technical and vocational schools that train personnel for the tourism industry, has developed a new qualification structure of the tourism industry within the framework of the European Training Foundation (ETF), «National Qualifications Frameworks in Central Asia». For approval of its experimental testing is needed.

For this purpose, with the support and direct participation of the Agency implemented a pilot project to introduce a flexible qualification structure in the tourism sector as a pilot project.

In the past two years, work was undertaken on amendments and additions to the Classification of Economic Activities and Classifieds areas of training by industry in conjunction with the Ministries of Labour and Social Welfare, Education and Science and the Statistical Agency, the Ministry initiated in connection with the implementation of cluster development tourism.

At the same time, was introduced an auxiliary account in the tourism, which is formed on the basis of tourism statistics, and which allows us to estimate the contribution of the tourism industry to the economy of the state. However, it still needs to continue the improvement statistics on a par with countries, the share of tourism in the economy of more than 50%.

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*Materials of Conferences***THE ROLE OF HUMANITARIAN
TECHNOLOGIES IN ENHANCEMENT
OF A HIGH EDUCATIONAL INSTITUTION
MANAGEMENT QUALITY**

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The world practice shows that an important part of the «innovation-driven economy» is creation favorable conditions by the state to form special intellectual elite of the society – people who are changing the future, the so-called «creative class».

Availability of educated youth and concentration of scientific activities, a special environment facilitating development of new knowledge and technologies, aspiration of everyone for innovation and self-development are indicative of state capability to make technological breakthroughs. In this regard President N.A. Nazarbayev pays a special attention to the issue of personnel training of a new formation. On his initiative the state program of education development was drawn up, a new law on education and science was passed, appropriate measures on improvement of the current system of training and retraining were specified, education is being modernized, new intellectual schools are being established, innovative models of higher education institution are created on the basis of Nazarbayev University, international personnel training is being conducted under the «Bolashak» program.

However, education must not only ensure the establishment and development of innovative economy but the formation of cultural values in the society of a new millennium: the freedom of choice, independent actions, having initiative, tolerance, and responsibility for the near and distant future. The goal of the national education system today is becoming «the most important factor in the humanization of socio-economic relations, forming personal attitudes» [2].

In the framework of the country's innovative development strategy humanization of socio-economic relations is characterized by the fact that culture and competency management is more important than system and procedure management.

A new management paradigm is formed as a method of a quality breakthrough in cognition and understanding of the management essence as means of developing human capital. Today there is a need to work out management concepts which adequately reflect characteristics of the «knowledge-based economy» and in which a key resource of organizations is intellectual capital – a set of necessary personal, cultural and professional competencies. The

higher intellectual potential of a state, the higher its national competitiveness is.

«Knowledge-worker» is one of the key terms that appeared in the world educational space last decade. Such employee is not formed by the mastering standard work methods. The essence of the «knowledge-worker» is participation in mastering and creation of knowledge (knowledge creation, modification and synthesis, implementation of information management, the production of analytical services, data collection and processing). Those who able to work in a team with extensive competences rather than a narrow specialization and have developed adaptability and purposefulness are in demand. Joint actions of self-regulatory teams of an organization create «... a positive synergetic effect – competitive advantages of jointly working subjects at a minimum resource and time expenditures» [3].

In the work of a growing number of organizations there is a trend in transition from simple execution of instructions given by staff leadership, hard regulations, algorithm based actions to flexible, complex types of activities which require idea generation, synthesis of solutions and its implementation plans based on information analysis. This activity requires, as a rule, joint work in groups, discussion of possible solutions to problems and experience transfer.

Last decade has witnessed a new trend in management theory which is called the «talent management». It is a type of an organization activity which helps to identify not only the current level of professional competence and effectiveness, but potential of employees and make investments in a talented staff. According to the published findings of the 2006 study of American Society for Human Resource Management (SHRM) «Talent Management Initiatives Survey» most American organizations use talent management systems. According to the President of SHRM C.P. Mazinger more and more severe competition in the global marketplace dictate new rules for achieving success through effective talent management schemes, as well as the fact that every employee's career aspirations are in sync with the mission, goals of the organization as a whole [4].

Meanwhile, analysis of the domestic management theory and practice has shown that issues of human resource management system, development of managerial models that enable to develop and use personal potential of education subjects are mostly neglected.

In the circumstances, management of higher education development should be aimed at, first of all, the most efficient use and increase of employees' talent and optimization of all their activities.

Therefore, the development of management models to intensify and use this potential is becoming more urgent. In this case the process of management based on actualization of innovative potential of higher education subjects must be build on the value-oriented approach that, in its turn, defines the requirements for creating modern management systems on the basis of *humanitarian technologies*.

The term «humanitarian technologies» has increasingly been used in recent years in the context of the humanistic paradigm of education and society. In the general sense, humanitarian technologies are technologies focused on personal development and the creation of conditions for this. In other words, these are the ways of improving the moral and ethical standards of behavior, development of intellectual capacity and physical health [5, p. 29].

Management on the basis of the humanitarian technologies as a new approach to the education system management includes identification, development and cultivation of values which, on the one hand, meet the strategic objectives and functions of education as a social institution and, on the other hand, are shared by those who implement these objectives and functions. Implementation of the humanitarian technologies in management requires consideration of employees' personal values, forming a system of organizational values that leads to the development of human capital and, ultimately, quality improvement of the organization.

For example, organizations in the work with human resources apply technologies aimed at development of individual and personal qualities of staff, improvement of interpersonal relations and socio-psychological climate of staff, promotion of professional growth, creativity and business partnerships, and etc. The management function of humanitarian technologies is designing of social and professional activity of staff and the basic elements of humanitarian technologies in this field are assumed to be actions in the field of personnel policy, upgrading and social mobility, employees' motivation and incentives, development of multilateral and multidirectional communication, conflict management and etc.

There are the following humanitarian technologies in the sphere of management:

- promotion to the market of the brand or product within the associated lifestyle (public relations, brand-building, marketing, advertising);
- organizational design and project management;
- reflexive management;
- behavior management;
- personnel assessment, selection, their motivation, training and psychological support (personnel management);
- development of theories of absolute creative content production for all intellectual products.

For example, organizations in the work with human resources apply technologies aimed at de-

velopment of individual and personal qualities of staff, improvement of interpersonal relations and socio-psychological climate of staff, promotion of professional growth, creativity and business partnerships, and etc. The management function of humanitarian technologies is designing of social and professional activity of staff and the basic elements of humanitarian technologies in this field are assumed to be actions in the field of personnel policy, upgrading and social mobility, employees' motivation and incentives, development of multilateral and multidirectional communication, conflict management and etc.

Here are applications of humanitarian technologies in the field of management:

a) society system management, which can be characterized as the unity of the market economy, civil society and rule of law. In such system, subjects of the market, free citizens and legal entities are on the one hand, and mechanisms that make the market, social and legal relations happen on the other hand, are concrete definitions of «reflective» elements and management itself as humanitarian technologies;

b) management of the education sphere, which according to its function should train adapted to real life for real public education system. The main step in the management implementation is to understand that executors should not be managed but the system of reflective elements (creativity, innovation and etc.) Moreover, it is reflexiveness of the system elements that forms the only resource for further development.

Thus, from among various educational technologies one can single out a separate constituent – humanitarian technologies of management designed to create an organizational environment that would help to achieve a person's potential and generate new ideas (the principles, ideas) that will undoubtedly lead to the achievement of a quality new result in the university activity.

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The work was submitted to International Scientific Conference «Actual Problems of Education», Greece (Crete), 17-24, October, 2012, came to the editorial office on 06.09.2012.

*Short Reports***MANAGEMENTOLOGY, A NEW CONCEPT, SCIENCE, AND DISCIPLINE**

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We have suggested this very name for this concept – *managementology* – because the number of types of management grows annually, new kinds of management arise, and studying the whole complex of this multiplicity becomes important. Knowledge of causes of their emergence with a proper theoretic grounding, possession of scientific basics with corresponding concepts and methodology actualize such mastering.

Managementology as a new science implies a complex of management types as an object of study, and their theoretic and methodic ideas that ground on methodical basis of general management theory as a subject. It must be taught properly in order to train specialists who have actual knowledge and skills for social-economic and organization-management practice.

Therefore, the suggested educational discipline «Basics of managementology» is considered not only as an urgent, but also as a useful one if the received knowledge is applied in practice. It requires competence in accounting, selection, combination, ranging, or even combining management types in order to achieve goals of a particular organization. It required knowledge of all management types with all their peculiarities in their complexity.

We think that such science must consider the fact that we all witness implementation of management practice in terms of material-virtual business environment. The existing and emerging numerous types of management draw our attention to conditions of «traditional» economy with its material resources (earth, labour, capital, substance, energy) and doesn't consider conditions of virtual environment with its non-material (intellectual) resources. We introduce a special type of management – *infocom-management* – for conditions of virtual environment. It has its own theoretic-methodical ideas and concepts of managing an organization, staff, that operates in terms of indirect communication and using means and channels of telecommunications along with such non-material resources as knowledge, ideas, concepts, intellectual capital, types of intellectual property, know-how, schemes of their commercialization, schemes of communication, their digitalization, etc. information here is considered as a recourse, and relevant knowledge, that is needed to make decisions, forms during its interpretation. The knowledge itself is considered as a prior recourse and is also studied as a factor

and a potential, as well as an active and a product that forms income [1].

In order to provide effective, though «distant» tele-impacts, tele-interactions, and forms of tele-collaboration, infocom-management widely implements information, computer, telecommunication systems, networks, means, and technologies with corresponding programme products (XT). For this reason virtual component of the studied system is called *infocom environment* (X) [2]. An adequate infocom-management can be considered as a certain premise for grounded emergence and formation of managementology in terms of modern material-virtual business-environment.

Considering such environment managementology must:

- Study theoretic-methodologic basics and methodic regulations of each of management types considering their part in the whole complex;
- Make corresponding theoretic generalizations;
- Reveal trends and possible ways of further diversification of management;
- Define prospects of management development in terms of modern environment, people's life, organizations;
- Enrich methodology and theory of general management with «particular» methodologic instruments and concepts.

Let us underline that the object of study for managementology is not only investigation of management types' «specialization» and their complex mutual dependence, but also integration of knowledge, received in them, in order to find new approaches, methods, concepts, principles, legislations, and laws of management and its trends to develop. Besides, the existing methodologic aspects of each of management types should be studied in terms of methodology of general management, so it can be enriched with new results that are received in different types of management. Managementology should also consider the fact that now diversification of management keeps «high temper», considering material and virtual components of the studied life environment.

From original sources we know that 80 types of management were revealed in 1994, and by 2006 this number came to 300 [2]. According to our evaluations, there are about 400 of them now. Today we can name types of management that are relatively well studied in both theoretic-methodological and conceptual-technical aspect, but it refers far not to all types of management. It could provide for revelation of trends in development of management and ways of its further diversification on scientific basis, and then the whole complex of management types could be studied as a complex of correspond-

ing theories with its diversity of shades in methodological tools of management.

Thus, managementology is supposed to:

- Show the necessity to use methodology of general management for each management type while forming and designing it theory;
- Reveal specific theoretic-methodological correspondence with the theory of general management, its laws and principles, functions and methods, mechanism and technology for each type of management;
- Define prospects for development of types of management according to the theory of management types;
- Provide complex integration of knowledge in management types to define ways of further diversification of management.

Therefore, theoretic-methodological and methodical concepts and methodic ideas of each of management types and knowledge, received in them, as well as integration of this knowledge in their relation and synthesis is important for enrichment in theoretic, methodological «arsenal» of the theory of general management that provides for its development.

Besides, concepts of infocom-management theory form the position of managementology has a great interest for us while studying aspects of all management types in terms of intensively-developing virtual business-environment. Here each of management types should consider the system of conceptual principles of infocom-management, its system-network approach, and also infocom mechanism and typical characteristics of management in terms of X [1, 3], including aspects of *infocom culture* [4].

That is why we study basics of infocom-management as a premise of managementology formation as a concept, science, academic discipline on the complex of management types, ways to diversify and develop management theory in terms of modern material-virtual business-environment.

In conclusion we would like to underline:

1. All the expressed above has a direct link to one of our hypothesizes that have been suggested earlier in our works that were devoted to formation of infocom-management theory: on the one hand, as we know, «an economy is efficient, if its management is», and, on the other hand – «an environment is virtual, and communication-communicative processes and results of indirect interaction between people in it are real», and, therefore, further diversification and emergence of new management types is inevitable, considering peculiarities of X and management within it.

2. As XT develops and gets wider use in social-economic and organization-management activity, theory and results of management practice of infocom-management will increase their impact upon the development of other management types and emergence of its new variations.

3. Managementology is now only our idea and hypothesis on such subject, but an urgent scientific and academic need: its actual meeting is necessary in order to carry out so-called «methodological specification» of new emerging management types with different adjectives before the word «management» that are not always grounded, considering the methodology of general management, its approaches and methods, concepts and system of conceptual principles, legislations and laws. Thus we need to find a solution to the discussion on what specific laws and rules, principles and other concepts exist as due theoretic basics in strategic and innovative management, personnel and finance management, production management and controlling, logistics and marketing management, and many other management types (books on them exist, ideas on them claim to be theories in sciences that are already given as academic disciplines), not mentioning such types as «karmic management»...

The author of this article during many years have been telling students of managementology in terms of lectures of corresponding academic courses that he gives to students. Of course, managementology itself is in state of formation and adequate «design». Nowadays we try to upgrade the developed earlier variant of academic discipline «Basics of managementology» via, first of all, considering modern requirements, standards, new methodic provision, and, on the other hand, enriching the complex of management types as ways to control organizations, personnel in terms of market economy, new emerging management types.

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THE PRINCIPLE OF STATE SOVEREIGNTY IN TERMS OF GLOBALIZATION PROCESSES

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Principles of every political system as the essential political and legal directions define the main traits in political system, its gist and content, forms of government and politic, basic aspects of legal regulations for relevant social relations, and also the order for political, social and economic system functioning, simultaneously, they are the major concepts for their organization and operation. The above stipulates the necessity to analyse main principles of a political system, which are inherent to all or the majority of its institutions. One of such principles is the principle of state sovereignty and independence.

Keywords: sovereignty, globalization processes, independence

During last years in the jurisprudence, particular meaning was given to the issues of state sovereignty theory and practice. It is connected to the development of integration processes in the second half of the XX century, which involved not only economical but political sphere. Academic publications examine the legal nature of a state, social and national sovereignty. These concepts are closely interconnected and function in a single system.

In the law doctrine there is no unity in the determination of such a category as «sovereignty». The implemented analysis distinguishes following approaches: «sovereignty as one of the obligatory, integral sign of a state» [1, p. 57; 2, p. 120; 3, p. 31; 4, p. 10; 5, p. 58]; «sovereignty as a specifically defined principle of a social and political life» [6, p. 14; 7, p. 463]; «sovereignty as a supremacy of government in solving internal and external political issues» [8, pp. 68–69; 9, p. 130]; «sovereignty as a government monopoly to use a state authority in the sphere of its jurisdiction» [10, p. 304]; «sovereignty as a statehood» [11, p. 9, 71]; «sovereignty as a political and legal state characteristic» [12, p. 17]; «sovereignty as a limited authority» [13, p. 222]; «sovereignty as a social and political function of a mono- and poly-ethnic states» [14, p. 990] etc.

The above allows to assume that during the nowadays stage of development of Ukraine as a sovereign, legal, democratic state, it is important not to make mistakes in the exposition of sovereignty, since in the theoretical sphere there are plenty of approaches to the definition of the term «sovereignty» in the context of different concepts: «absolute sovereignty», «multitude of sovereignty subjects», «partitioned sovereignty» etc. Exactly therefore, a correct and scientific interpretation of the term «state sovereignty» content and the definition of its correlations with the other related concepts are particularly important.

In spite of their actuality, state sovereignty problems stay among poorly examined issues in the modern jurisprudence. This range

of problems is also bringing up to date in the context when Ukraine integrates to the world community and there is a necessity to ensure the state sovereignty in the conditions of social and economic globalization. There is a need to emphasize that in the conditions of globalization, theoretical constructions are substantiated and they defines the necessity of an essential limitation of government feasibility both in internal sphere and in particular beyond its borders and suitability of state sovereignty limitation [15, p. 24; 16; 17].

On the assumption of the above, not the half of aspects of this issue can be considered as a confined. Worldwide processes of globalization, the ingress of Ukraine into a lot of international association, forming of the transnational corporations, creation of interstate communities, activation of interstate governmental and non-governmental organizations and institutions activity which needs new approaches towards the analysis of sovereignty concept.

A question about choosing the state development strategy has fundamental meaning, since in the conditions of globalization are the matter of keeping the state sovereignty. The assertion of national interests, own fundamental positions in foreign affairs and keeping the sovereignty demand nowadays essential efforts from the government [18, p. 112]. In this context there are following issues: imbalance among state authority bodies; incompleteness of political, administrative, territorial reforms; strengthening of legal nihilism; lack of coordination between the economical solutions which are important taking into account national interests and which badly influence upon the economic, including power security of the state.

Also, it is very important to examine that mechanism of providing the state sovereignty as a complex system which includes mechanisms, procedures and principles with the help of which the supremacy and independence of the governmental authorities is ensured. In this context, especially actual is the analysis of

state sovereignty problem as a basic principle of a political system.

In spite of some distinctions in the understanding of state sovereignty essence by scientists, it is possible to single out such general signs as dominance and supremacy of the government on its territory; state independence in foreign affairs; unity in state sovereignty (state authority). There is a need to note, that sovereignty is an integral characteristic of the state and is practically realized in specific legal forms.

Juridical content of the state sovereignty is defined by the present domestic theory.

While synthesizing the implemented analysis results, it should be noted, that the state sovereignty is characterized by the following clauses:

1. The state sovereignty is a historically stipulated political and legal sign of the government, which manifests itself in its independence during the realization of both external and internal functions. In the course of liberal political and legal ideas genesis, the absolutist concept of a sovereignty underwent the changes in two directions: «the change of subjects», «the sovereignty limitation». The first direction in forming the idea of the limitation in the ultimate state authority essence is connected to the change of sovereignty power subject. The main idea of these revolutionary by their nature views was the shift of sovereignty to such a subject of the political system as people. Consequently, the idea of the state sovereignty in its absolutist interpretation transforms into the doctrine about the people's sovereignty. The second development direction of the idea about the limitation in the ultimate sovereignty is connected to the formation of the «checks and balances» concept, within the scope of which different mechanisms of state authority control and demarcation of authoritative permissions were modelled.

2. There is a need to preserve the terminological purity of the «sovereignty» notion in science and practice of its usage for describing the supreme authority of the government, as far as the usage of this term in another meaning (economical, political, financial, legislative sovereignty etc.) leads to its bleeding, devaluation and loss of the political and legal value of this category.

3. The state sovereignty should be guaranteed and protected, this fact detects the necessity to have a special mechanism of its guaranteeing and protection, which should be considered as a complex system of measures, procedures and principles, with the help of which the supremacy and independence of the state authority is guaranteed. Legal measures of the state sovereignty guaranteeing are juridical

instruments (structural-functional institutions and technologies) which help to guarantee and support the supremacy of the state authority, state independence and individuality.

4. Under present-day conditions, the state sovereignty in its foreign-policy aspect is limited by the system of international legal relations, and in its domestic policy it is restricted by the democratic right of people to be the only source of the state authority. The realities of the modern geopolitical situation define the duality of the position of Ukraine in the world arena. This situation is stipulated on the one hand by the objective necessity to integrate to the worldwide processes, and on the other hand – by the need to preserve and guarantee the state sovereignty. The state doesn't lose its sovereignty in terms of the modern globalization processes. There is need to note, that new realities of the world politics undoubtedly have an influence upon the geopolitical processes both international and regional. Geopolitics as a mean to achieve national interests is one of the most important constituents during the guaranteeing the state sovereignty in terms of the world globalization. The strategy of the state development in terms of globalization is the necessity to consolidate the statehood.

The problem lies in the absence of precise strategic priorities, which would be able to take into account the reasonable combination of participation of Ukraine in the international processes, on the one hand, and the ensuring of the state interests on the other hand [21, p. 134]. In terms of globalization processes, there is an extension of the significance of the questions connected to the guaranteeing and ensuring of the external state sovereignty, which is a quintessence of the social and economic, political and legal interests defended by the state in the world arena. The above confirms the need to work out a long-term strategy for the development of Ukraine as a sovereign state in a globalized world.

5. The presence of such a peculiarity as a sovereignty is a base for the emergence of the sovereign rights, through which it is juridically implemented.

Thereby, the state sovereignty is a historically stipulated, defining and integral political and legal sign of the state, which manifests its supremacy in the frames of its territory and independence in foreign affairs. The activity of every state, including Ukraine, is determined by the real inner and outer conditions; economical, political and social environment; the level of society development; international differentiation of labour and other factors. The sovereignty is an integral characteristic of the state and is practically realized in specific legal forms. Thereby, the principle of sovereign-

ty, independence of the state is its immanent characteristic, defining and integral sign of the supremacy of its power inside of the state and independence in foreign affairs.

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THE INFLATION PRESSURE AS A PARAMETER TO THE CORRECT OPERATION OF THE VEHICLE

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Establishing and maintaining optimum tire pressure in a car is an important operational task not only for drivers but also for manufacturers and designers involved in automotive industry. The manufacturer specifies the limiting parameters of the average pressure in the tires, which can not be neglected. Operation of the vehicle associated with changes in external environmental parameters, and therefore the problem is highlighted in a separate factor in controlling and maintaining the required optimum inflation pressure that is directly related to its operation is technically correct. The author raises questions about the effects on the environment, emergency and technical characteristics of the operation of the vehicle when regulating the air pressure in the tire. An important issue is the measurement of pressure and signal the driver when changing a tire, what has succeeded in large automobile concerns. For Russia, the problem of pressure change and its optimization are particularly relevant because of poor quality roads, distances, climatic factors affect the change, which leads not only to an increase in accidents, premature tire wear, impact on the environmental parameters.

Keywords: inflation pressure, parameter, tire pressure in a car, the vehicle

Man in the era of high technology too relies on always functioning equipment. What tires and require constant maintenance and care are fully forgotten the majority of drivers. The tire is almost a trifle.

Prof. Dr. Hans Eberspeher, University of Heidelberg [7]

The main parameters of the tire are its size and the internal air pressure. Low-pressure tires have greater contact area with the road surface is more easily overcome some minor bumps, causing a lower risk of slipping and provide better throughput. High-pressure tires provide less wear and cause a smaller loss on rolling on roads covered with asphalt. When operating a vehicle to make sure that the internal tire pressure was maintained within the established norms. In addition, each of the TO-1 and TO-2 pressure should be measured and if necessary, to pump up the tire. At constant weather conditions the pressure test procedure is carried out about once a month or 203,000 miles. If the temperature changes dramatically, check the pressure must be at once. Typically, when cold it falls through the denser air, and in hot weather – increases by several tens of percent. The value of inflation pressure indicated on the sidewall is not recommended. This is the maximum permissible inflation pressure. The recommended air pressure indicated:

- manual for the car;
- on a sticker located in the doorway next to the driver's seat;
- in the glove compartment next to the driver's seat;
- on the inner side of the hatch fuel filler.

The argument in favor of the choice of tire pressure, which indicates the manufacturer of the car is that the manufacturer specifies it in such a way as to match the claimed stopping distance control. At the same time, the manufacturer specifies the parameters averaged for

all makes of cars. And the settings are limiting, and then there are those who can not cross. Typically, the manufacturer specifies the optimum air pressure in car tires for partial and full load. If you specify only one value, the pressure in the tires on a fully loaded car must be increased to 0,3–0,5 atm. By the same amount is to increase the pressure before a long trip on the freeway. Must take into account the fact that the pressure that is specified in the service book your car or on the information plate is recommended for cold tires. This means that it must be checked in the morning, before the trip, and before the sun or rising temperatures will warm bus

Air – a gaseous substance, it expands when heated and contracts when cooled. When the temperature of the ambient air at 8°C, the tire pressure will change by about 0,1 atm. (Increase with increasing temperature and falls with decreasing). In most parts of Russia the difference between average summer and winter temperature is around 28°C, so with the establishment of winter temperatures on the pressure drops by about 0,35 atm. A lack of 0,35 atm. have a significant effect on the handling, traction and wear! In addition, the difference between a cold night temperatures and warm day in most parts of the country is about 11°C. This means that the pressure is set in the morning, at noon, will be about 0,13 atm. above (if the car is parked in the shade). In the inflated a hot afternoon on the following morning the wheel pressure is 0,13 atm. below, and if the car is parked in the sun, then the pressure will rise artificially short time under the influence of his heat.

The most important condition for the correct operation of the tire is to maintain an optimum internal air pressure. When selecting the internal pressure are guided by the value of the load, in some cases, the speed, as well as on

road conditions. In this regard, the pressure of air in the tires of road transport is a key parameter of the safe and proper use of car tires and the car itself, so the control of the state of the pressure becomes an important issue in the automotive industry. The importance is emphasized by the fact that road transport is the backbone of the state's economy, and the pressure that does not match the standards leads to many adverse outcomes, such as: increased energy costs for freight and passenger transportation, as a result, cost overruns lubricants and premature tire wear that will result in additional costs for maintenance. And all of this together will at least increase the cost of the cost of passenger and freight traffic, which will affect the value of goods and services that interact with the motor complex. There is also a reason, which highlights the importance, include the following: deterioration in the overall environmental background due to excessive emissions of harmful substances from exhaust gases, lowering your car at high speeds due to changes in stopping distance and increase the slip.

In addition to pollution wear products, automobile tire in need of further recovery and recycling, which every year becomes more and more urgent problem related to the rapid development of the global automotive industry. Currently, in most cases, recycling of tires is reduced to throwing them to the dump or landfill. This method is environmentally hazardous, since the period of the decomposition of tires in the wild is about one hundred years. During this period there is leaching of toxic substances that enter the soil and atmosphere. According to statistics, in Russia and the CIS is released annually about one million tons of tires. Experts say that only in the Moscow region annually collects approximately 90,000 tonnes of tires consist of the operation. In the operation of buses occurs fixation of atmospheric carbon, a way to combat that has not been invented by scientists. Rates run tires require change tires approximately every 2–3 years. This means that annually enter landfills in the tens of thousands of tons of recycled materials. A correct operation while maintaining the desired air pressure will help reduce the number of car tire wear, increasing their mileage. The following key points that minimize negative impacts on production and operation of automotive tire recycling, using environmentally friendly manufacturing techniques, proper maintenance and repair.

Feeling of social responsibility, tire manufacturers are also introducing cleaner from an environmental point of view of technology. This trend can be traced to the French group MICHELIN, its annual budget for research in ecology of production is about 500–600 million Euros. Improving consumer characteristics

and specifications of tires, the company simultaneously improve environmental performance and its products. Thus, engineers and scientists group was significantly reduced rolling resistance characteristics. This automatically leads to lower fuel consumption and reduce harmful emissions into the atmosphere. Constantly introducing new energy-saving technologies, the inorganic components are replaced with natural raw materials, etc.

The main modern types of scrap tires are burning and processing into crumb rubber, or carbon-containing powders that are used in the manufacture of roofing materials, bituminous mastics, cast of rubber asphalt and other materials for road paving, sorbent materials for plugging wells and hydro insulation of pipes in oil and gas industry. But in 2012 in Belarus, tire recycling has reached a new level of technology. Experts from different countries have tried a variety of ways to recycle tires, but the most effective method was developed by Belarusian scientists. They invented the installation of recycling tires in the so-called «light oil» from which you can get different brands of gasoline, diesel and fuel oil. Recycling of tires can only deal with companies that have agreed statement on waste management, and obtained a license to use the third class of danger.

According to the company RoadSnoop Safety System decreased by 10% the pressure changes the car's handling, increase fuel consumption by 4 and 30% reduction in tire life. We should not forget that the rapid wear of rubber causing irreparable damage to nature, both due to recycling of worn-out, and due to the production of new tires.

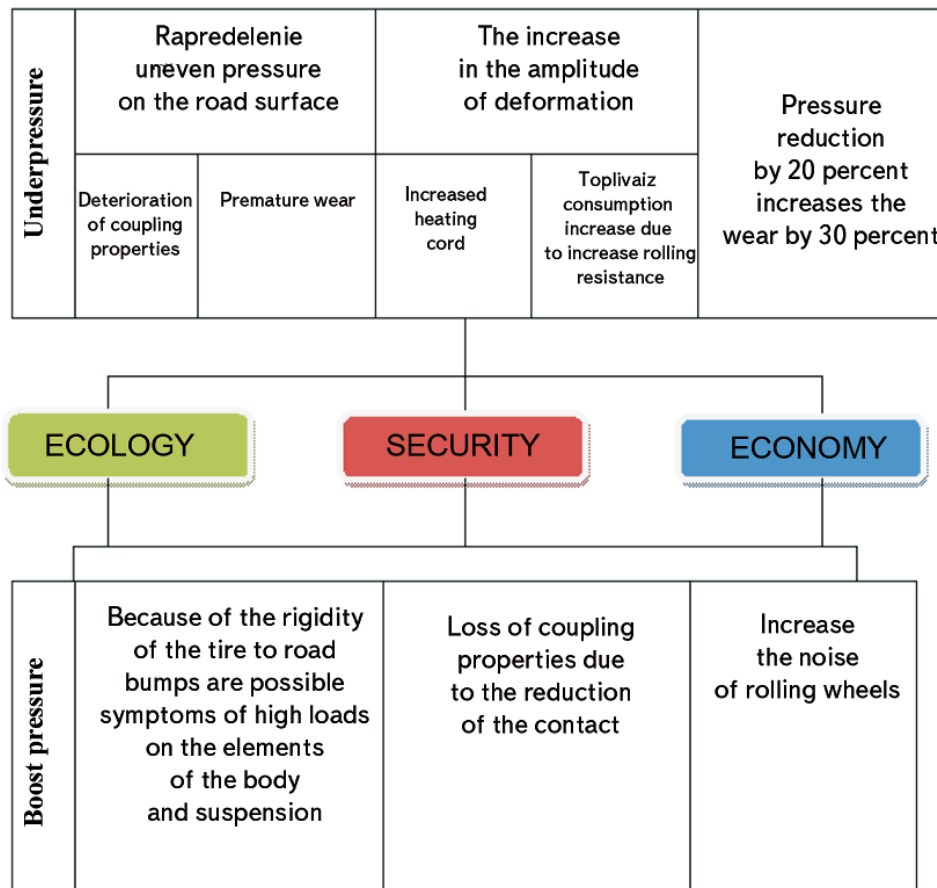
The problem of controlling the air pressure the statistics of accidents. The National Road Safety U.S. claims that 85% of drivers do not check tire pressure, tire pressure does not correspond to normal in more than 50% of passenger cars. As a result, due to accidents associated with abnormal pressure in the tires, die every year up to 660 people and 33,000 people injured. According to U.S. statistics, and in Russia, unfortunately, such calculations are not conducted, and information about the accident is not analyzed, about 1,5% of road accidents is due to low tire pressure. If we convert interest into actual figures, for Russia it will be as follows: 1,5% of the 200,000 traffic accidents occurred during 2010, 3000 will be accidents, which is also quite a lot. The figures for the statistics of our country may be even sadder because of the poor quality of roads, as the poor quality of roads lead to faster wear and deformation of the tire. According to the site www.autonews.ru properly inflated tires in Europe, where well-off enough of the road, cause every sixth car ac-

cident in July and August in the holiday season when families go on vacation by car. The difference in pressure in the tires a few tenths of a bar-to-face is impossible. According to studies the difference in the 0,3–0,4 bar for leading the front wheels, or 0,5–0,7 bar for the rear wheels is critical, that is, with such a difference a driver can not be sure of the reaction of the car on acceleration, braking or change of direction. Improper tire pressure can cause it to explode.

Changing winter tires in summer is usually done in spring when the temperature is about 5 degrees. Summer is the temperature reaches 35 degrees or more. The higher the temperature, the greater the pressure in the tires, that is, if two atmospheric pressure was 2, then 35, it can reach up to 3–4 atm., which depends on the quality of rubber. Improper tire pressure can lead to unnecessary financial spending. Fuel consumption increases by about 1,22 liters per 100 kilometers traveled by the way, that is, with mileage of 20,000 kilometers of gasoline cost overruns of about 240 liters. As a result of improper tire pressure of their service life is reduced by 25–30%, and also wears a vehicle suspension.

Initiators for the introduction of modern control systems pressure tires are American manufacturers. The manufacturer of Firestone tires in the U.S. in the late 1990s, which was associated with more than one hundred deaths from overturning the Clinton administration pushed for adoption of the law. This law stated the need for the use of TPMS (Tire Pressure Monitoring Systems) technology to warn drivers about the serious condition of tires. This law applies to all passenger motor vehicles sold after September 01.2007. Work began in October 2005 by 20% and reached 100% for models manufactured after September 2007. In the U.S. as of 2008 and the EU in 2012, all new vehicles must be equipped with TPMS. There is still controversy about what system to put, whether it is an indirect system, and whether it will be sufficiently accurate tool for achieving security TPMS. European companies also pay great attention to passive safety. Therefore, the TPMS system normally installed on many models of car brands like AUDI, BMW, etc.

The components of the problem need to control the pressure in car tires is schematically represented in Figure.



Components of the problem of choosing the optimum pressure in a car tire

The world's first system of centralized control of air pressure in the tires came to the U.S. on a floating four-wheel drive amphibious truck GMC-DUKv 1944. In the Soviet Union in mid-1953 built the first prototype of the BTR «swap» – VMS-152V («Object 140V»).

In winter 1954 fashion show at VMS 152V (RDVSH system) on the Cuban ground in the presence of the Chief of General GBTU A.M.Syha machine reduced to 0,5 kg/cm² pressure in the tires reliably pass through the pit, covered with snow and deep snow drifts there, which lost twice to compare the mobility of which was started the famous T-34-85. It was the first in the world of wheeled armored vehicle with a serial Ultra High Performance tires adjustable pressure, and in this unconditional and avowed priority of our country. Total inclusive of 1959 was released in 2904 BTR-152V. At the same time went into a series of modifications, and armored personnel carriers to swap – 152E and 152S (in 1955 – 30 and 12 machines). But finally the system was completed in suitable for all structures only in 1957. It was quite technological and without much difficulty was implemented on the machines, «152V1», «485-A», «157». Since then, in addition to RDVSH Russian scientists have proposed various ways to maintain a constant air pressure in the tire.

Patented invention is a device for automatic control of pressure in the pneumatic tires of a moving tractor (RU 2189910 C2), the pump to maintain a constant air pressure in the pneumatic tire (RU 2032551 C1), a device for regulating and visual indications of pressure in the pneumatic tire of the vehicle (RU 2171183 C1) and others.

Of the foreign companies who have made significant contributions to the development of an automatic tire inflation, it is necessary to note the development of companies in the U.S., the Czech Republic and the UK.

On November 1, 2003 in the United States began operating the first phase of implementation of the system pressure check tire (Tire Pressure Monitoring Systems – TPMS). Manufacturers should have provided the first year of the existence of this system in 10% of cars produced in the second – 35% during the third year in 65% of the total production. At this stage, it was required that the system warns the driver if pressure in one or more tires differs by more than 25% of the value specified by the manufacturer.

Since 2005, approximately 90% of the issued in the U.S. passenger car equipped with this system. It is assumed that all vehicles (cars, SUVs, station wagons and small buses) will use the tire pressure monitoring system and notify

the driver of your problem, the inclusion of an appropriate indicator of the instrument panel. Such systems are installed, such as car parts Toyota Sienna, Oldsmobile Alero, BMW third and 7 series, Audi A8 (from 2001.), Ford 2002, Nissan / Infiniti in 2000, VW Touareg, etc.

In this regard, the American company proposed to equip the Maxair passenger transport system for the automatic tire pressure ATMI (Automatic Tire Monitoring & Inflation). The introduction of such technology was a logical development now installed on some cars of systems that monitor the condition of tires, signaling the driver when they are down. The system is designed for measuring, correcting and equalizing the pressure in automobile tires to the specified parameters, has a compressor with a reservoir for air controller, connected to each bus separately. In addition, the trail of each wheel has its own shut-off valve with a digital sensor that continuously monitors the pressure. If the required tire pressure decreases, the valve opens, the compressor and electronics. Thus, if the tire is damaged, the pump continues to periodically fill it with air.

The company CODA DEVELOPMENT s.r.o. (Czech Republic) has developed and patented a system of automatic tire inflation SIT (English Self Inflating Tire), the use of which will maintain the optimum tire pressure. Thus, the SIT system provides an effective solution of problems associated with a fall in tire pressure – will increase tread life, reduced fuel consumption and the probability of being in an accident due to the descent of the tires. The new system of SIT – simple and inexpensive solution, based on the principles of the peristaltic pumps. In the wall of the tubular tire is built in camera. When the tire rotates, the camera acts as a pump, forcing air into the tire so long until you reach the desired pressure. Then, the control valve automatically stops further swapping. As a result, tires operate at optimal pressure during the entire operation. The driver of the vehicle is completely relieved from having to manually check the pressure in the tires and swap them. It should be noted that the proposal has many common parts with domestic invention (patent number 2,032,551 RU C1), the proposed by Pahunov A.A.

In 2012, WABCO introduced its concern the latest development in the control of pressure in the tires Integrated Vehicle Tire Pressure Monitoring (IVTM). IVTM system allows the driver to maintain the necessary pressure in the tires, which reduces fuel consumption by 2%, and increases tire life by 20%. IVTM system is suitable for all types of wheels of light, medium and heavy trucks. Mounted on each

wheel sensors constantly measure the tire pressure and wirelessly betray this information to the control unit (ECU). ECU warns the driver about the changes in pressure by easily mounted display in the cabin.

Thus, the information on which improperly inflated tires are a major cause of excessive fuel consumption and give rise to accidents on the roads, is a scientifically proven. Based on all of the above facts, it is necessary to emphasize the importance of the issue of control of the internal pressure of air in the tires and the need for a technical device, whose purpose is the control and optimization of air pressure, which is especially important for Russia, with its varied topography and the composition of soils and climatic factors.

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Materials of Conferences

USING A COMBINED METHOD OF WASTEWATER TREATMENT OF ORGANIC POLLUTANTS

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In order to develop methods of systematic pollution control Wastewater dairy industry we studied process engineering from the point of view of water operations, made-patent literature review of methods of treatment and methods of studying the physical and chemical composition of the waste water.

Scientific idea of work is the scientific assessment of ways to choose effective methods of wastewater treatment and their effective combination based on the monitoring of wastewater effluents in relation to the composition of meat and dairy companies, to ensure water circulation in the industry.

Today, the Republic of Kazakhstan has more than 300 enterprises of meat and dairy industry. Therefore, a significant consumer of fresh water in our country is the food industry, namely, meat and dairy industry. To 1 ton of product consumed

an average of 20–30 m³ of water. Therefore, the growth of water consumption outstrips growth treatment plant, which is one of the main factors of water pollution problems. Moreover, even with the most advanced treatment, including biological, all dissolved inorganic substances and 10% of organic contaminants remain in the effluent.

Waste water discharged by enterprises meat-milk processing industry, are divided into four categories: industrial, household, heat exchangers, heavy.

The water used in the dairy industry for the following purposes: cleaning tank with a hose, steaming tank-cleaning coolers, washing the milk, weights and weight of tanks. Water is also used for washing containers storing milk, steaming them, as well as equipment and floor space. Therefore, dairy effluents are highly polluted and contain substances which, in each other's presence complicates treatment of wastewater disposal at any direction (as in the sewer and the water body). Moreover, prolonged exposure of wastewater under anaerobic conditions (septic tanks, sewage networks) leads to zakisaniyu by lactic fermentation and decrease in pH below 5. Average for the composition of wastewater dairy and meat industries are shown in Tables 1 and 2.

Chemical composition of dairy wastewater

Table 1

Consecutive number	Nameindicator	Unitmeasurement	Valueindex
1	Suspended solids	mg/l	300–900
3	BOD	mg/l	1200–8380
4	Fat	mg/ l	100–205
5	Chloride	mg/l	150–300
6	Total nitrogen	mg/l	60–90
7	Phosphorus	mg/l	6–8
8	pH		6,5–8,0

Performance of wastewater meat industry

Table 2

Consecutive number	Name indicator	Unit measurement	Value index
1	Suspended solids	mg/l	700–3500
3	BOD	mg/l	1800–2700
4	COD	mg/l	2100–5600
4	Fat	mg/l	250–1300
5	Chloride	mg/l	150–300
6	Total nitrogen	mg/l	107–175
7	Phosphorus	mg/l	37–73
8	pH		6,4–8,0
9	Temperature	°C	17–28

From the data in the table shows that the high value of the index as much BOD characterizes biological waste water charge shall dairy.

In the meat industry, water is used in the process of washing carcasses, viscera of animals, cutting and dushirovanii carcasses. These effluents contain sand, blood, grease, food particles kanygi, hair, and so on. In the sausage shops water consumed in the preparation of meat, spice preparation, preparation casings, Waste water containing particles of fat, meat, blood, protein, salt.

Wastewater meat industry are different from dairy wastewater enterprises high BOD (microorganisms). This is turn increases the risk of reproduction of pathogenic bacteria and viruses. It is also necessary to note the lack of treatment facilities in major markets of Almaty where meat is slaughtered. Effluent used for meat processing are released into the small rivers are close to the markets. Given the available data on the average composition of the wastewater (Table 1 and 2), we propose a combined method of processing waste, which is the following: wastewater subjected to mechanical cleaning, which removes various mehanoprimesi, followed by pressure flotation stage (removal of emulsified fats, oils) waste water is subjected to coagulation reagent, where solids can be processed to obtain the feed product, clarified solution is supplied to the biological treatment after the removal of biomass, depending on the components of impurities, various methods of waste water purification using natural sorbents.

Rationale for the selection stage of purification is directly related to physical and chemical composition of the waste water meat and dairy enterprises.

Thus, we propose an effective method of wastewater meat and dairy industry to a level consistent use of environmental security to date.

The work was submitted to International Scientific Conference «Innovative medical technologies», France (Paris), 15-22, March, 2012, came to the editorial office on 18.10.2012.

UTILIZATION HIGHLY PARAFFINIC OF OIL WASTES AND THE DEVELOPMENT OF SCIENTIFIC AND PRACTICAL FOUNDATIONS OF RESOURCE-SAVING TECHNOLOGIES

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In Republic of Kazakhstan the intensive development of oil and gas industry play a leading role. The inevitable consequence is the increase of anthropogenic impact on the objects of the environment. In the areas of design, production, transportation and refining of crude oil recorded violations of the natural ecological balance.

Consumption of oil and gas in recent decades become one of the most important terms of eco-

nomie development of Kazakhstan, which in turn consists of the five environmentally disadvantaged sectors of the domestic industry. In this regard, a new approach to the formulation and implementation of environmental projects, environmental protection in oil-producing regions, which is the practical realization of tasks set by the President of Kazakhstan Development Strategy until 2030: «The environmental, sanitary and epidemiological services, and standards bodies should work in accordance with priority goals» [1].

As the analysis of the problem and our research with technological waste should include: minimization of their generation, environmentally safe handling, the maximum separation of the groups already at the stage of education to enable the most efficient ways of recycling or disposal of waste in each group, the development of affordable and technically feasible technologies to involve waste of resource management. Need to develop methodological approaches that address the problem of disposal of industrial wastes are not the traditional ways and methods of improving the consumer properties. Such approaches to involve the waste of resource management should be the basis for strategies to deal with man-made waste and the appropriate technical solutions.

This suggests that the development of scientific and practical bases of resource-saving technologies of solid waste to ensure environmental safety Geosystems is the important economic problems whose solution requires the development of new conceptual approaches and eco-solutions.

Alarming increase of accumulated annual hazardous solid oil waste in the absence of recycling, leads to the alienation of land for long periods, which can be calculated for decades. At the same time, they are secondary material resources, which can be used in road construction, as well as gidroizoliruemyh materials instead of raw materials and to obtain a patent fuel.

Given that the waste oil has a significant impact on the environment, an important task is to develop and implement science-based standards of education oil waste at all stages of the cycle of oil production. Among all the problems in dealing with oil waste one of the primary advocates of optimal choice of recycling or disposal, providing a given level of environmental safety.

Our approach to recycling asphalt-resinous paraffin deposits (ARPD), consisting of organo-mineral mixes waterproofing designed to provide a material having a high physical-mechanical properties, using available and inexpensive components. As shown, the structure of organo-mineral waterproofing material that determines its physical and chemical characteristics, due to the properties, quantitative and qualitative components, technological methods, conditions subsequent hardening.

One of the key questions to identify the possibility of obtaining materials with desired physical

and mechanical properties is to assign the optimal composition of organo-mineral waterproofing mixture, which should be understood as a quantitative and qualitative combination of components, ensuring compliance with the general requirements for waterproofing design to the material.

To determine the optimal composition of organo-mineral waterproofing material performed laboratory tests of samples. Also, we have conducted field investigations on the experimental area, in order to justify and confirm the environmental

safety of the technical efficiency of the developed design.

Our studies have established the optimum mixing ratio of organo-mineral waterproofing material in wt. % – Clay is 43–47, the sand – 15–20, lime – 10–15, AFS – 20–25, Rubber – 2–5.

Material composition is optimal given the physical and mechanical properties: compressive strength – 85–100 kg/cm², water absorption – 0,7–1,0%, the filtration coefficient – $0,95 \cdot 10^{-10}$ – $2,0 \cdot 10^{-10}$ m/s. (Table 1).

Table 1

The results of laboratory tests of samples of the proposed organic-waterproofing-material of different composition

Consecutive number	Performance	Composition, wt. %						
		Lime-20 Sand-10 Clay-60 AFS-9 Rubber-1	Lime-5 Sand-25 Clay-40 AFS-25 Rubber-5	Lime-15 Sand-15 Clay-43 AFS-25 Rubber-2	Lime-10 Sand-20 Clay-47 AFS-20 Rubber-3	Lime-15 Sand-15 Clay-45 AFS-20 Rubber-5	Lime-12 Sand-17 Clay-46 AFS-22 Rubber-3	Lime-12 Sand-15 Clay-43 AFS-25 Rubber-5
		1	2	3	4	5	6	7
1	A compressive strength, kg/cm ²	37	40	85	120	100	95	88
2	Water Absorption, %	1,35	1,1	0,96	0,65	0,70	0,90	0,95
3	Filtration coefficient, $1 \cdot 10^{-10}$ m/s	5,50	4,40	0,90	1,44	1,55	2,00	1,60

Filtration coefficient is at the level of requirements of normative documents [5–7], shown to protect an anti-landfill facilities for the disposal and disposal of all waste types (Fig. 1).

The scientific value of the work is to extend the possibilities of increasing the waterproofing material production using waste oil.

Thus, control of movement of waste oil by minimizing their education, environmentally sound management, involvement of resource management is an important task and requires the development of new conceptual approaches, and environmental technology solutions. One way to address emerging environmental and economic problems is substandard in size briquetting of coal, which will translate it from the waste into the category of commodity products. Briquetted fuel is a mechanical and thermal solid billet product having a specific geometric shape, size and weight. It is obtained as a result of physico-chemical processes with the use of additives (binder) or without them. Briquettes shall meet the following requirements: have a weather resistance, mechanical strength, adequate porosity, temperature resistance, maintain a minimum quality of water (Fig. 2) [4].

Based on these studies, it is established technological regime briquetting process. The composition

of the mixture, which are substandard coal, rice husk, and asphalt-resinous paraffin deposits (ARPD).

Varieties of complex physico-chemical, structural and rheological processes that occur during the formation of a briquette of structural framework, due to the large number of independent factors. It is therefore necessary to identify the most significant factors providing significant influence on the intensity of the adhesive and cohesive interactions autohesive and how, during the preparation of briquette mixture, and when pressed. The analysis allows to maximize the positive factors in the development of the optimal composition of briquetted topliva with paraffin, coal and rice husk. Among the key factors that have a significant effect on the system *struktroobrazuyuschee* «AFS – coal – rice husk», above all, should indicate the nature of the chemical and physical characteristics of paraffin, coal and rice husk, and their ratio in the system and the condition of interaction. (Table 2).

For briquetting coal fines are intended to apply as a binder AFS and rice husks, which are able to combine disparate solids and keep them strong contact in conditions of significant external influences, that is, provide a solid structure to obtain briquettes [4, 5].

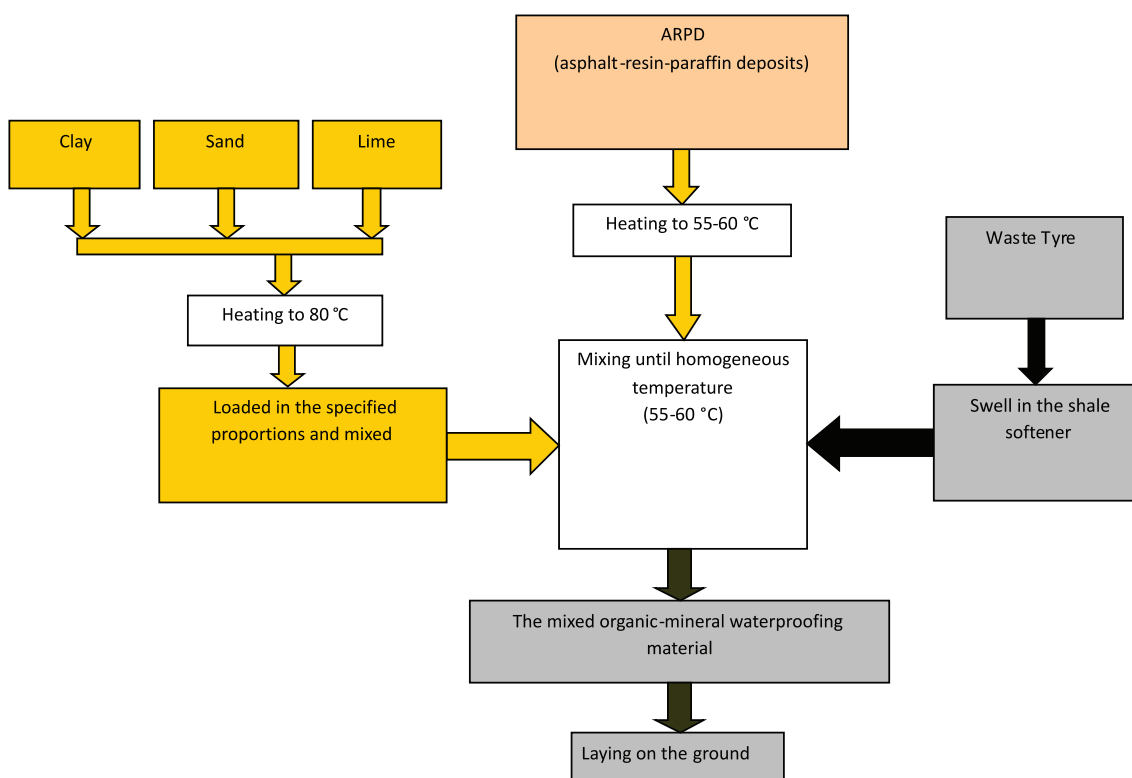


Fig. 1. Technological scheme of sample preparation of organo-mineral waterproofing material on the basis of ARPD

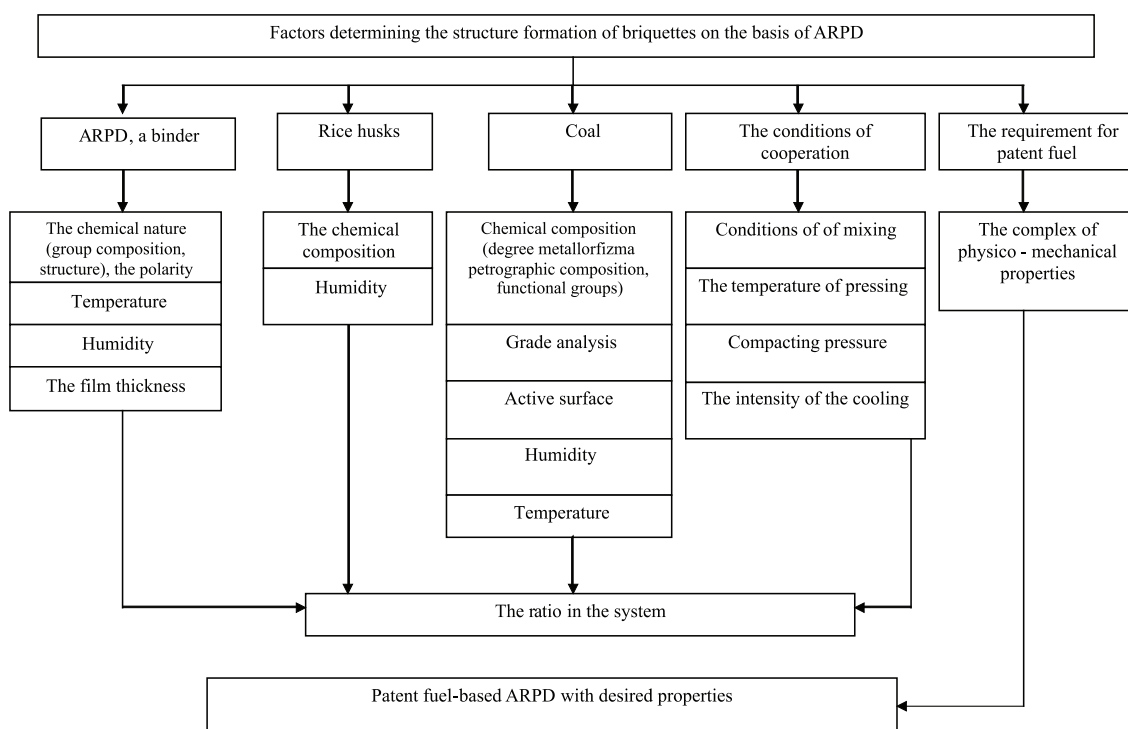


Fig. 2. Analysis of the factors that determine the processes of structure formation of briquetted fuel, based on the ARPD

Table 2

Characteristics of patent fuel prepared on the basis of ARPD

Mixture	The composition of patent fuel, weight%		
	Briquette from bituminous binder	Briquette-based oil waste	Briquette is based on the ARPD
Coal	92–94	33–91	60–75
Binders	6–8	9–67	20–25
Rice husks	–	–	5–15

Based on the foregoing, the technology of recycling highly paraffin oil as a waterproofing material, organic-based asphalt-resin-paraffin deposits (ARPD) and rubber waste, as well as the technology of production and use of patent fuel, to enhance the possibilities of increasing fuel and raw materials industries using oil and vegetable waste (rice husk) as a secondary raw material supply. Prepared by a

working model for the production of fuel briquettes from asphalt-resin-paraffin deposits and rice husks. Established the amount of heat of combustion consider patent fuel. To do this, the calculations made by changing the concentration of components briquettes possible band reception. To calculate compiled a computer program and the results are shown in Fig. 3.

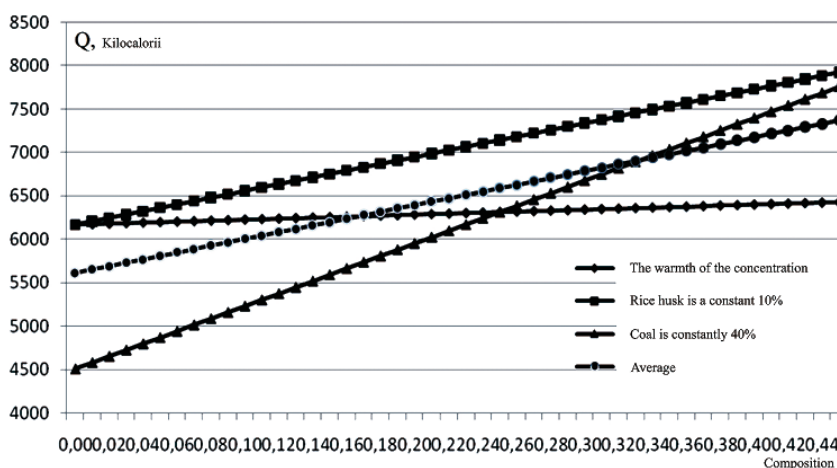


Fig. 3. The value of the heat of combustion of briquettes obtained at different concentrations

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The work was submitted to international scientific conference «Priorities for Science, Technology and engineering», Egypt, 15-22, August, 2012, came to the editorial office on 28.06.2012.

THE DYNAMICS OF ACCUMULATION OF OIL WASTE AND METHODS OF THEIR RATIONAL USE

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Oily waste, depending on the process of education, industrial wastes are 2–3 classes of toxicity and the main sources of environmental releases a wide range of hydrocarbons: liquid, solid or gaseous. For contaminants (pollutants) present in oil wastes are characterized by high water solubility and volatility, in addition, they are solvent can concentrate other substances. All of this oily waste poses a risk of contact with the natural environment, particularly, with the ecosystem.

Oily waste have a negative impact on virtually all components of the environment: surface water and groundwater, soils, vegetation, air, biota.

Alarming increase of accumulated annual hazardous oil waste in the absence of steamed scale

recycling lead to the alienation of land for long periods, which can be calculated for decades. At the same time, oil wastes are secondary material resources and in their chemical composition can be used in the national economy instead of the primary raw material.

Given that the wastes of oil has a significant impact on the environment, an important task is the development and implementation of evidence-based standards of education oil waste at all stages of the cycle of oil production. Among all the problems in dealing with oil waste one of the primary advocates of optimal choice of recycling or disposal, providing a given level of environmental safety.

Thus, control of movement of waste oil by minimizing their education, environmentally sound management, involvement of resource management is an important task and requires the development of new conceptual approaches, and environmental technology solutions.

In this article we consider the use of oil waste as secondary material resources. For this purpose the analysis and compilation of scientific and technical literature in the studied direction, conducts experimental research in the laboratory, developed energy saving technologies.

In the first approximation in the study included:

1. Comprehensive analysis of the conditions of formation, composition and properties of oil waste generated as a result of emergency situations in the extraction and transportation of oil;

2. Classification of oil waste in order to assess the resource potential in the justification of the methods of disposal;

3. Recycling of solid oil waste to produce valuable commodity products, or less environmentally hazardous materials.

The objects of research were:

– Oil production enterprises, which produce oil waste;

– Oil waste as the main source of environmental contamination and as secondary resources;

– Materials derived from oil waste.

The technological processes of oil production are divided into a set of unit processes and their associated production facilities, such as maintenance, injection and disposal wells, group metering installation, metering installation, etc. For each type of activity characteristic of the environmental aspects to and associated impacts on the environment. Thus, oil sludge pits, tanks and processing tanks, pipelines are responsible for about 50% of the negative impacts on the environment caused by the formation of oil waste [1].

There are currently a priority to improve the environmental safety of oil-producing enterprises in the region of the complex is to reduce the volume and the number is not authorized by the storage of oil waste pits. In addition, the further accumulation of oil waste also leads to significant pollution due to the nature of emissions of harmful components.

Thus the process of storing oil wastes will not automatically improve the environment, so the next step and not deferred to reduce development pressure on nature is reclaiming contaminated land management and restoration of soil fertility [2].

Most oil wastes generated during mining, preparation, commercial and highway transportation of oil and gas, as well as filling and cleaning of oil tank wagons for transportation of petroleum products in the oil waste oil terminalov. The resulting of oil waste conventionally divided states of aggregation: in liquid and solid.

The liquid oil waste formed as a result of processes:

– Pumping of oil-contaminated layer of water (effluent) in preparation for installation of oil pre-treatment of oil (IOPO);

– Washing the oil railway tanks;

– Breakthrough with the hit oil pipelines in solid or water surfaces;

– Collection of oil-contaminated runoff from the territory of the CPF to the location of oil waste.

The liquid oil waste is a water-oil emulsion with the oil content of up to 90%.

The main sources of formation of solid oil waste are:

– Underground and capital repair of wells;

– Breaks of pipelines to hit oil in the open ground;

– Cleaning of oil storage tanks;

– Leakage of oil through the pump seals.

All solid oil waste formed at the stages of production, preparation and transportation of oil and gas, can be divided into three types: waste repair, asphalt-tar-paraffin deposits (ARPD), oil ground.

The composition of oil waste directly depends on a result of which operation it is formed. Moreover, oil waste formed in the repair of wells, contain up to 35% of heavy petroleum fractions (resins, waxes, asphaltenes), a significant amount of mechanical impurities and water. Thus except for ARPD in the general composition of the waste contained oil ground repair, which is formed in contact with oil on the open ground. Oil ground is formed at mopping sewer manholes and clean-up of oil contaminated soil from spills. It is characterized by relatively low organic matter content (20%) and plenty of solids (80%).

A special group of oil waste are asphalt resinous paraffin deposits (ARPD). They are formed during sweeps of technological equipment (oil storage tank, a shootout, wells, etc.), steam cleaning the tubing with the use of special units for dewaxing. Unlike other solid ARPD oil wastes represent a pure organic product, not mixed with the ground and containing only high molecular weight solid hydrocarbons (up to 95 wt.%).

Classification of waste oil drilling production helps to justify the need for their separate collection, warehousing, storage and disposal of the application of various technological methods. In practice,

these wastes are generally independent of the state of aggregation and composition, together are going to place objects (excluding the portion of liquid oil waste to be placed in special facilities). The greatest commercial interest are liquid oil waste containing up to 90% oil. The problem of their disposal is currently solved by recycling the existing scheme of preparation of commodity products. Full utilization of liquid oil waste, even on a single enterprise, reduces the total number of oil waste by 75% and a return of resource turnover in the commercial oil.

From the above it follows that measures aimed at minimizing the formation of oil waste should include:

- Introduction of modern equipment, excluding oil leaks during normal operation;
- Development and implementation of evidence-based norms and standards of technological losses of oil waste education;
- Creation of legal and regulatory framework at the federal, regional and sectoral levels, regulating different values of the specific losses of oil and stimulating products to reduce losses;
- Differentiation of oil waste streams at the stage of education, allowing to increase the degree of extraction of raw materials from waste for the maximum yield of finished products;
- Keep a regular job for the remediation of contaminated land (oil ground) and restore soil fertility;
- Continuously implement a program of scientific and experimental verification of recommended technologies that lead to the possibility of practical realization of technological methods of disposal of solid oil waste.

The problem of ecological safety in the treatment of solid waste of oil is a topical all over the world, but particularly acute in Kazakhstan, in virtually every oil-producing region.

As shown by our studies, treatment of oil waste should include the development of affordable and technically feasible technology to involve waste of resource turnover. Need for new methodological approaches to solve the problem of disposal of oil waste is not the traditional destructive methods, and techniques to improve the consumer properties, removal of impurities and excess components, concentration, dehydration and other methods of enrichment with the use of waste in the related areas of production. Such approaches to involve the waste of resource management should be the basis for strategies to deal with oil waste and the appropriate technical solutions.

One of the ways to address emerging environmental and economic problems is substandard in size briquetting of coal, which will translate it from the waste into the category of commodity products. Briquetted fuel is a mechanical and thermal solid billet product having a specific geometric shape, size and weight. It is obtained as a result of physico-chemical processes with the use of additives (binder) or without them. Briquettes shall meet the following

requirements: have a weather resistance, mechanical strength, enough porosity, temperature resistance, maintain a minimum quality of water [3].

In Kazakhstan, was not and still do not, briquette factories that are in demand among consumers. Now, many private entrepreneurs are trying to manufacture bricks, but without the scientific – technical and system training. Therefore, all attempts fail, even though at first glance, the technology of production of briquettes seem simple.

Use of substandard coal briquetting technology will completely avoid the environmental benefits and also to profit from further manufactured commodity products – briquettes.

In this work proposed the introduction of charge formers fibrous structure-formative which are not binding. Assumed that these structure-formatives will play the role of a «rebar» reinforcement pellets. As we know from the coal can not get water-resistant bricks. However, the negative influence of this factor can be neutralized surface treatment of briquettes or packing them in plastic bags.

The calorific value of briquettes, if ash content is not increased by an inorganic binder, it is higher calorific value of raw coal by increasing their density in comparison with the original coal.

Thus, the main parameter optimization in this case is the strength of the briquettes obtained, that is a temporary resistance to compression (σ_{cp}).

Based on these analyzes, established technological regime briquetting process. The composition of the mixture, which are substandard coal, rice husk and asphalt – resinous paraffin deposits (ARPD).

Varieties of complex physical – chemical and structural – rheological processes that occur during the formation of a briquette of structural framework, due to the large number of independent factors. It is therefore necessary to identify the most significant factors that have a significant impact on the intensity of the adhesive, cohesive, and autohesive interactions, both during the preparation of briquette mixture, and when pressed. The analysis will minimize negative and maximize positive factors in the development of optimal fuel briquettes using ARPD, coal and rice husk.

Among the key factors that have a significant effect on the system structure-formatives «ARPD – coal – rice husk», above all, should indicate the nature of the chemical and physical characteristics of ARPD, coal and rice husk, and their ratio in the system and the condition of interaction.

The dominant role in the formation of a solid frame structure owned coal briquettes binder. Influence of the binder to identify a set of physical – chemical and structural – rheological properties, chief among them – adhesive ability and cohesion depends on chemical nature of the binder. In addition to the processes of structure formation have a temperature, humidity, thickness of the adhesive binder film.

For briquetting coal fines are intended to apply as a binder ARPD and rice husks, which are able to combine disparate solids and keep them strong contact in conditions of significant external influences, that is to provide a solid structure to obtain pellets [3, 4].

The structure of the coal briquettes can be viewed as a system composed of connecting elements and the elements at the location (dispersion medium – binding (ARPD) and the dispersed phase – coal and rice husk).

In the process of mechanical impact coal – ARPD – husks, under the influence of temperature between the solid particles is a process of binding. As a result, a connected firm mixture is formed. The mixture was then poured in some form, and pressed to a certain temperature.

As the result of experimental studies on the production of briquettes from the ARPD, set process

parameters of briquetting process. The main important factor for briquetting is to establish quantitative and qualitative relations ARPD components, coal and rice husk.

Basically, the preparation of pellets cost of oil binder is 6–8% of the total mass of the briquette. In the application of oil waste relative costs of 9–67% (Table). In this regard, based on studies identified the optimal composition of the mixture: ARPD 20–25%, carbon 60–75%, 5–10% rice husks;

In connection with the foregoing, validated and proved the possibility of utilization of ARPD and rice husk as a binder for coal briquettes. It sets the optimal technological parameters of briquetting of coal waste, rice husk with ARPD. It defined the optimal ratio of components in the new fuel briquettes. Developed a resource-saving technology for producing fuel briquettes from ARPD.

Characteristics of the fuel briquette prepared on the basis of ARPD

Composite	The composition of patent fuel, weight %		
	Briquette from bituminous binder	Briquette on the basis of oil waste	Briquette on the basis ARPD
Coal	92–94	33–91	60–75
The binders	6–8	9–67	20–25
Rice husks	–	–	5–15

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The work was submitted to the International Scientific Conference «Fundamental research», Croatia, 28 July - 1 August, 2012, came to the editorial office 02.07.2012.

Materials of Conferences

**AN IMPACT OF KEABY METALS OVER
AN INTENCITY OF PROCESSES
OF POL AND ACTIVITY OF ANTI-OXIDANT
SYSTEM OF UNDERYEARLING
CARP BLOOD SYSTEM**

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An impact of cadmium, lead, and marganese over an intensity of free-radical processes in underyearling carp blood processes has been studied. An activation of processes of peroxide oxidation of lipids, oppression of catalase, and also oxidation of general anti-oxidant activity under chronic (40 days) impact of cadmium, lead, and margagnese salts has been investigated. The received data testify for a shift in oxidation-anti-oxidant balance in blood of card underyearlings in terms of chronic toxicant impact.

Different natural and anthropogenic factors can have a significant impact over correlation in processes of peroxide oxidation of lipids and anti-oxidant activity among freshwater hydrobionts [9]. Activation of peroxide lipid oxidation is observed under an impact of the most different extreme agents (including such widespread toxicants, as heavy metals) and provides for a mobilization in protective forces of an organism, including mechanisms of anti-oxidant protection. In this case our in-

terest is drawn to defining correlations of POL and GAA in blood of hydrobions under a chronic impact of heavy metal ions.

Methods and materials. The work has been carried out on a basis of laboratory of anatomy, physiology, histology of Dagestan state university. Card underyearlings (*Cyprinus carpio* L.) of mass of 100–150 g were used in the experiment. They were grown in pods of Shirokolskiy piscicultural complex of Republic Dagestan. The fish was carried to aquariums of volume of 250–300 litres with contents of lead acetate 0,5.

Fish were transferred to aquariums 250–300 liters of lead content matsetata 0,5 mg/dm³ (MPC 0,1 mg/dm³), cadmium chloride 0,25 mg/dm³ (MPC 0,005 mg/dm³), and marganese sulphate 0,1 mg/dm³ (MPC 0,01 mg/dm³). The fish that was contained in fresh water served as a control. Conditions of constant temperature (19–23°C) and gas regime were created. The fish was fed with alive sludge worm *Tubifex-tubifex*. At different periods of fish exposition in water environment with heavy metal ions (days of experiment 5, 15, 30, and 40), contents of malonovogodialdegyde (MDA), catalase (CA), and general anti-oxidant activity (GAA) in blood was defined [5].

The received results are proved with variative-static processing via method of small selection [7].

The results of the study are presented in the Fig. 1-3.

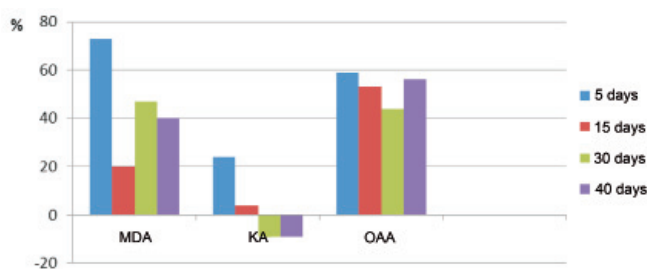


Fig. 1. Dynamics of indicators of oxidation-antioxidant blood carp fingerlings (in% relative to the control) under the influence of Pb²⁺ ions, depending on the duration of intoxication

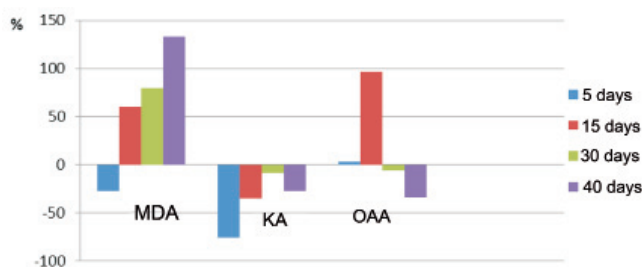


Fig. 2. Dynamics of indicators of oxidation-antioxidant blood carp fingerlings (in% relative to the control) due to Cd²⁺ ions, depending on the duration of intoxication

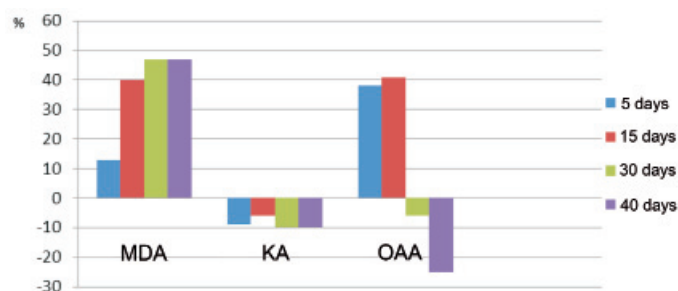


Fig. 3. Dynamics of indicators of oxidation-antioxidant blood carp fingerlings (in% relative to the control) due to Mn^{2+} ions, depending on the duration of intoxication

The intensity of POL under an impact of heavy metals was evaluated according to the contents of MDA in under yearlings blood. During the experiment, an increase in MDA contents was registered under an impact of heavy metal ions. A maximum increase in the indicator was observed during the 5th day of the impact of lead ions (of 73,0%) and during the 30th and 40th day of containing with cadmium ions (of 80,0 and 133,0% correspondingly). A continuous impact of heavy metal ions increased a growing intoxication of POL that is proved by an increase in MDA contents in carp under yearlings' blood (from 60% to 133% under the impact of cadmium ions, and from 13,3% to 46,7% – of manganese ions) (pic 2, 3), while the greatest increase in MDA contents under the impact of lead ions was registered during the 5th day with a further decrease during the 15th, 30th, and 40th day of 28,0; 16,0; and 20,3% correspondingly, in relation to the 5th day (table, Fig. 1).

Enzymatic link of anti-oxidant protection also changes. An increase in catalase activity (of 24,0%) was registered during the early periods of lead ions impact (day 5). Inhibition of ferment activity was registered in other variants of the study. It was mostly expressed during the 5th and the 15th day of the impact of cadmium ions (catalase activity was decreased of 75,6 and 34,7% correspondingly in relation to the control).

The sources of the catalase activity in blood plasm are erythrocytes [8]. The ferment plays a key part in anti-oxidant protection of an organism, and in this case we can conclude an oppression of erythrocytic ferments of anti-oxidant protection under the impact of heavy metals.

Dynamics of MDA contents, general anti-oxidant and catalase activity in blood serum of carp under yearlings under the impact of heavy metal salts ($M \pm m, n = 15$).

Toxicant	Exposition day	MDA, nMole/l	Catalase, mcMoleH ₂ O ₂ /l/minute	GAA, mg %
Lead acetate (0,5 mg/l)	Control	15,03 ± 0,29	0,164 ± 0,003	32,13 ± 0,19
	Day 5	25,80 ± 0,48**	0,204 ± 0,003**	51,30 ± 0,32**
	Day 15	17,86 ± 0,15**	0,170 ± 0,001*	48,74 ± 0,26**
	Day 30	21,80 ± 0,15*	0,150 ± 0,001*	46,23 ± 0,35
	Day 40	20,53 ± 0,43**	0,150 ± 0,001*	49,53 ± 0,88**
Cadmium chloride (0,25 mg/l)	Day 5	11,41 ± 0,48*	0,040 ± 0,003**	33,33 ± 0,32
	Day 15	23,50 ± 0,15**	0,108 ± 0,001**	63,00 ± 0,26**
	Day 30	27,15 ± 0,15**	0,150 ± 0,001*	30,15 ± 0,35
	Day 40	35,30 ± 0,43**	0,120 ± 0,001**	20,50 ± 0,88**
Manganese sulphate (0,1 mg/l)	Day 5	16,70 ± 0,12	0,150 ± 0,002*	43,60 ± 0,18**
	Day 15	20,50 ± 0,11**	0,160 ± 0,001	44,90 ± 0,23**
	Day 30	21,80 ± 0,20**	0,147 ± 0,15**	29,50 ± 0,18
	Day 40	21,81 ± 0,17**	0,147 ± 0,15**	24,10 ± 0,14**

Note. * – $P < 0,02$; ** – $P < 0,001$.

An insufficiency of ferment link of anti-oxidant protection can be defined by an initial oppression of catalase activity and toxic impact of heavy metals, a surplus consumption of anti-oxidant in result

of POL activation, and also a loss of anti-oxidant ferments through biological cell membranes [1, 2].

Thus, in terms of chronic impact of heavy metals, activity of anti-radical protection ferments is

oppressed. It corresponds to bibliographic data that testifies for a decrease in catalase activity under stresses of different aetiology [2, 3, 4, 6].

Accumulation of POL products goes along with an increase in GAA and proves the activation of anti-oxidant protection mechanisms. It is displayed most obviously under an impact of lead ions (GAA stays increased 2 times during the whole experiment). GAA is significantly higher than normal (of 96,9%) during the 15th day of containing fish in water with cadmium ions, and also during the 5th and 15th day of exposition with manganese ions (Fig. 2, 3).

The described alterations in indexes of oxidation-anti-oxidant protection of carp fish can be a result of the direct impact of heavy metals over functional condition of fish organism, and also a response towards stress that is caused by a continuous impact of toxicants. With the received data we can conclude that cadmium possesses the greatest toxicity and has its effect as an imbalance of the system POL-AOZ. The lowest balance of the system POL-AOZ was registered under the impact of lead.

The received data can prove the development of oxidant stress and mobilization of reserve characteristics of fish organisms in terms of intoxication with heavy metal ions.

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The work was submitted to the International Scientific Conference «Fundamental research», Israel (Tel Aviv), 16-23, October, 2012, came to the editorial office 13.09.2012.

*Materials of Conferences***BIORECUltIVATION
OF OIL-CONTAMINATED SOILS
OF SOUTH KAZAKHSTAN**

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The research has been conducted in the territory of «PetroKazakhstan Oil Products» LLP, where total content of oil products on local oil-contaminated areas varies from 1,23 to 25,56 g/100 g of soil. In these soils the content of humus is 1,6–1,8%, total nitrogen N – 0,146%, labile P₂O₅ – 38 mg/kg of soil. Acute toxic action of oil and oil products is showed as a sharp drop of breathing of oil-polluted soil and activity of soil ferments that became especially evident when oil and oil product concentration has increased. In the course of studying of oil hydrocarbons biodestruction it has been found out that hydrocarbon-oxidizing bacteria, which are isolated from oil-contaminated soils and selected, influence on qualitative composition of oil hydrocarbons. 1-butylbenzene, 1,2-ethylbenzene, prehnitene, naphthalene, phenanthrene, anthracene undergo complete biological destruction.

«Peroil» preparation has been developed on the basis of *Micrococcus luteus* B1Ag8G and *Rhodococcus erythropolis* DP 304-B7 strains. This preparation allows cleaning the soil from oil and oil products up to 91,7% within the period from 1 to 6 months.

In order to make it possible to re-utilize oil-contaminated territories, *phytoremediation* stage, using oil-tolerant species of plants, and *vermiculturing* stage, using earthworms, are recommended to be included in biorecultivation works cycle in the conditions of South Kazakhstan.

Phytorecultivation technology implies the following activities: plowing of soil up to 30–40 cm depthward, seeding of oil-tolerant plants, such as creeping finger grass (*Cynodon dactylon*) and common reed (*Phragmites australis*), in quantity of 15–20 g/m² at oil concentration in the soil of up to 5,0%. In order to provide a nutrition to plants and spontaneous rhizosphere microbial flora, 1,0% ammophos is to be applied. Additional introduction of active strains of hydrocarbon-oxidizing microorganisms allows enhancing cleaning degree to 97,3%.

Oil products have not been detected in cleaned soils after use of vermiculturing, as a last stage of biorecultivation works. At the same time the content of humus in loamy gray soils has achieved the value of 1,9%, in gray-brown soils – 0,8%, mountain light-brown soils – 2,7%, mountain dark-brown soils – 4,8%.

In summary, depending on conditions of oil contamination of substrates, weather and climate conditions in South Kazakhstan region, biorecultivation technologies shall vary in wide range of biotechnological capabilities, including, stepwise, the stages of microbiorecultivation, phytoremediation and vermiculturing.

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The work was submitted to the International Scientific Conference «Environmental monitoring», Turkey (Antalya), 16-23, August, 2012, came to the editorial office on 02.08.2012.

*Materials of Conferences***KOUMISS AND ITS MEDICAL QUALITIS
(BASED ON FOREIGN SOURCES
XIX – EARLY XX CENTURIES)**

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Useful qualities of koumiss (fermented mare's milk), the traditional drink of Kazakh nomads, are reflected in the foreign press. In the XIII century. Franciscan friar Plano Carpini points to the presence of mare's milk – koumiss in nutritional Mongols, William de Rubruck also gave a detailed description of koumiss, which he called «cosmos». Marco Polo called koumiss «milk-wine» [1, 95]. In France koumiss called «milk-champagne» because of the presence of gas, which made koumiss brilliant.

Foreign researchers origin of the word «koumiss» interpreted as follows: «The etymology of word koumiss seems to date back to the word «Cumans» militant nomadic peoples who inhabited the area between Tibet and Bukhara, on the banks of the Kuma River. The people, the Mongols conquered, inherited many of the traditions and customs, including and use koumiss» [2, 15]. Vary the spelling and pronunciation of the word: «chumis, chemius, koumys, koumis, koumiss, kumis, krumis».

Interest in koumiss in Western Europe was revived at the end of XVIII century. English physician John Grieve, who was in service in the Russian army in 1788, wrote: «In an age where there is not so many objects located outside of the studies that establish a strong scientific links, it seems surprising that one of the most important types of milk yet unknown in Europe. I mean wine made from fermented mare's milk. This liquor was ... completely unnoticed by experienced chemists, and even in Russia, which has determined the difficulty of getting the details of preparing» [3, 179].

French diplomat B. de Lesseps (1766–1834) explained that preparing koumiss based on the reaction of fermentation. Koumiss is the result of lactic fermentation of mare's milk: «Koumiss make ... with a characteristic odor of serum, slightly sour and spicy taste, leaving a fresh and pleasant after-taste» [4, 276]. In the 2nd half of the XIX century mare's milk as a product of opening Western travelers often use Russian doctors to treat tuberculosis and diarrheal diseases. Koumiss use for medicinal purposes in Europe and in France began in the 1870s. Because turned a big campaign to promote koumiss during 1875–1879 years. Of great interest was mare's milk for lactating women to increase lactation.

In 1874 E. Landowski, a Polish doctor, anthropologist, mason, was published a small monograph

«Du Koumys et de son rôle thérapeutique». Subsequently mare in France called «Koumys Edward» [5, 28]. A year later, in Nice was published a monograph by A. Lubanski «De l'Emploi du koumys dans le traitement des maladies de poitrine et des affections consomptives en general». The author gave the following description for koumiss: «Koumiss of Tatar-Mongols – this is their wine, vodka and food, it's feeds them, quenches thirst, and they get drunk from it, if necessary» [6, 4]. The authors note that the mare is also used for treatment of general body weakness, nervous disorders and weight loss. Positive results were obtained in the mare's milk in main hospitals in Vienna, Paris and Nice. At the International Exhibition of sea and river industry (Paris, 1875) «Koumys Edward» won the gold medal, which also received Kokosinsky E. and P. Landovsky for imports koumiss from Russia to France. The jury awarded the silver medal to a Philidor from Rouen for preparing koumiss. This exhibition has played an important role in spreading knowledge about the medicinal qualities of koumiss. And E. Landovsky became regarded as the competent person for its preparation and use.

Article by journalist R. de Varenge in journal «L'Exposition Internationale de 1875 Illustrée» medicinal qualities of koumiss [7, 246]. Three years later, the «Official Directory ...», published by the Chief Commissioner of the International Exhibition in Paris in 1878, informs that Koumiss-Edward and other fermented products were also presented at the exhibition by Landovsky and K^o (House «Koumys Edward», Paris, str. Provence, 14). The bronze medal went to the company «Landovsky and K^o (Seine)». International exhibitions in 1875 and 1878 marked the beginning of a series of publications on koumiss in French, English, American, Italian, German publicist, scientific and medical journals. Of course, dominated the publication in scientific and medical journals and magazines.

One of the most popular magazines in the professional medical sphere was the «Journal de sage femmes» published in Paris in 1873–1914. Throughout 1875 in the pages of 24 issues have published articles about the mare's milk, and there was a small ad offering to do mare yourself. French highest category doctors E. Neuzil E. and G. Devaux, authors of «Du Koumys et de son rôle thérapeutique» accidental on a fair of old things in Saint-Pons-de-Thomières identified the bottle, which was filled by mare in France [8, 98]. Bottle of thick dark glass, which should be located in a horizontal position because of its rounded bottom. This special form was bottled by sparkling mineral water, because the thickness of the glass, the roundness of the bottom create the best conditions for storage, the cork is always wet and not giving out

gas. These bottles are known as Hamilton bottles named after their creator.

In printing house E. Lévy in Paris about 1890 was printed billboard advertising koumiss Edward-size 29×39,5 cm The poster bears the inscription: «The only effective way to treat lung disease» and specify the price: 1 fr. 75 centimes per bottle. The poster was presented September-October 1973 at an exhibition organized by the International Congress of History of Pharmacy.

Important role in spreading of knowledge about the medicinal qualities of koumiss played the Association française de l'avancement des sciences / French Association for the Advancement of Science (AFAS), established in 1872. In report of third session of the Association Secretariat in 1874 reflected the information about the medicinal qualities koumiss. Among European publications that published material about koumiss also can be named a Berlin «Technical and chemical yearbook» for the years 1886-1887. London «International catalog of scientific literature: report of the Royal Society of London» (1898), monograph by Douglas McQueen «Bacillus long life ...» (London, 1911), American newspapers XIX – early XX century. For example, the American magazine «Medical Life: A Yearly Overview of Life in North Carolina Medicine» (1921, 28, № 3), published in New York by the American Society of Medical History, describes the therapeutic values of koumiss.

System source study analysis of scientific and practical experience of foreign researchers XIX – early XX century on the use of koumiss will be continuing.

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The work was submitted to the International Scientific Conference «The cultural heritage of Russia and the contemporary world», the United Kingdom (London), 20-27, October, 2012, came to the editorial office on 18.10.2012.

*Materials of Conferences***THE STUDENS' BIOLOGICAL AGE,
AS AN INDICATOR OF THE ADAPTATION**

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The diagnostic-level health indicators model for the direct-method determination of the biological age in the monitoring control by V.P.Voytenko adaptive capabilities of students at the Department of the Preventive Medicine, the Orenburg State University, has been introduced in this paper. The 116 boys, and the 164 girls at the age of 17–21 years have been involved in the study. The results, having obtained in the course of the study, and based on the biological age relative evaluations, have been shown a lower speed (e.g. tempo) of the women aging, in comparison with the boys. Dramatically, the slow aging rate has been found in 61,4% of the girls, and 58,3% of the boys, the slow aging rate has been found in 20,5% of the girls, and 16,7% of the boys; the biological age has been determined by the passport, 13,6% of the girls and 16,7% of the boys; the accelerated aging pace has been diagnosed at 4,5% of the girls and at 8,3% of the boys.

The cross sectional study and examination of 1,517 students, at the age of 17–21 years, having studied at the first course of the Orenburg State University, have been carried out. All the students had been living on the territory of the Orenburg Region five and more years (e.g. 60 and more months), gave the informed consent to be participated in the study. So, the exclusion criterion has been the student's illness during the period of the cross sectional study and examination. That's why, the method of V.P. Voytenko has been used for the biological age (BA) determination of the students. Thus, the BA young men $26,985 + 0,215$, BPS – 0,149, BHE – 0,151, SB + 0,723, SEH; the BA young women: $-1,463 + 0,415$, BPP – 0,140; SB + 0,248; BW + 0,694; SEH. So, the physiological testing has been performed for the biological age (BA) determination. A set of the tests for the young men and the young women has been differed.

BPS – the systolic blood pressure – it has been measured by the standard generally accepted method, by means of the Korotkov device on the right hand, in the sitting position, three times at the intervals of 5 min (e.g. 300 s), moreover, the lowest blood pressure values have been also taken into account by us;

BPP – the pulse blood pressure – it has been determined, as the difference between the systolic and the diastolic pressures (e.g. $BPP = BPS - BPD$), which have already been determined, by means of the Korotkov device;

BHE – the duration of the breath – holding after the deep expiration – it has been measured, by means of the stopwatch at the intervals of 5 min (e.g. 300 s), moreover, the highest value has been also taken into account by us;

SB (the statistic balancing) – the balance or the equilibrium maintaining time, while standing on the one leg with the closed eyes, sec. The SB duration is being measured. So, the test is being repeated three times, at the intervals of 5 min (e.g. 300 s), moreover, the best obtained result is being taken into account by us;

BW – the body weight, kg;

SEH (the subjective estimate of the health) – it is being assessed, by means of the questionnaire, having consisted of the 29 challenges. So, the questionnaire poll results assessment has been conducted on the total number of the adverse challenges and the responses. The poor ones are the responses «YES» to the challenges 1–25, the responses «NO» to the challenges 27–29, and the responses «bad» and «very bad» to the challenge 26. Then, the quality primary health estimate condition has been carried out: the excellent one 0–2 points; the good one 3–5 points; the satisfactory one 6–9 point; the poor one 10 and more points. The less accumulated points score, the better human health condition. The perfect sense of their own health is consistent with the self – esteem value, which is equal to «0» points; in the case of the various health general state violations, the index value can be gradually increased up to 29 points. So, the SEH is sharply being deteriorated, with the further aging on.

So, the values obtained have been compared with the biological age were to become (BAB), having characterized the population standard: for the young men: $BAB = 18,56 + 0,629 \times CA$; for the young women: $BAB = 17,24 + 0,581 \times CA$, where CA – the calendar age. Then, the health status of each student has been determined the aging degree value (e.g. $BA - BAB$). So, it is reflected the BA difference, having examined with the population standard. Finally, it has been made the conclusion on the individual health number, by the BA value. In the case, if the aging degree is greater, than the performance levels degree were to become, then the $BA - BAB > 0$. In the case, if the aging degree is less, than the figures were to become, than $BA - BAB < 0$. In the case, if the aging degree is practically the same, as the figures were to become, then the $BA - BAB = 0$. So, the most favorable ones are considered the last two options.

So, the obtained study final results have been shown a lower speed (e.g. tempo) of the young women aging, in comparison with the young men. Dramatically, the slow aging rate has been found in 61,4% of the young girls, and 58,3% of the young

boys, the slow aging rate has been found in 20,5% of the young girls, and 16,7% of the boys; the biological age has been determined by the passport, 13,6% of the young girls and 16,7% of the young boys; the accelerated aging pace has been diagnosed at 4,5% of the girls and at 8,3% of the boys.

This is consistent with the general view of the gerontologists that the young women age is practically much slower, and they are living longer for 6–8 years (e.g. 72–96 months) that it is reflected a quite slow decline at the first ones vitality, with their aging on. In this regard, under the assumption on the mutual correspondence of the relative and the absolute estimates of the BA, it can be considered the consistent facts. The calculation of the students' biological age (BA) was shown, that it had exceeded the calendar age (CA), on average, at the young men for 9,15 years (e.g. 108,15 months), and at the young women for 9,26 years (e.g. 81,26 months).

So, the index of the subjective estimate of the health (SEH) at the students, mostly, is quite good. Then, the SEH lowest rate has been determined $2,98 \pm 1,16$ at the young men, and the longest one $2,65 \pm 1,13$ at the young women. At the end, the BA has been shown that there are no students, who have dramatically the accelerated aging pace. The young men in the area of their calendar age are only 10% of the boys EG and 5,9% KG. The 16,7% of the young men and 13,6% young women have accelerated pace of aging. The main part of the examined students have the slow rate of their aging: 71,9% at the young women and 58,2% at the young men. Thus, the results of the study, which has been carried out by us, have been shown, that the students' biological age indicators are completely depended on their gender.

This technique using has been intensified the preventive direction of the work in the Orenburg State University. The automated system of the monitoring health (ASMOH) has already been created in the Orenburg State University on the initiative of the Federal Service Management of the Russian Federation for the control of the drug trafficking in the Orenburg Region with the participation of the management control of the modern information technologies in the Orenburg State University and the Center of the Information Technologies organization. This study has been carried out through the «Internet». Each student has his login and the password, through which they contribute their data to the various sections of this system. These are the special sections on the somatic health, the psychological health, the stress tolerance, and the social adaptation in the process of the leaning in the University. Just after the complete filling out all the necessary sections, the students will be received two types of their recommendation – the general character on the healthy lifestyle creation and the individual one formation, with due regard for his personal characteristics and also the life circumstances. Thus, the biological age determination by the V.P. Voytenko

technique is practically and completely included into the ASMOH for the individual health and the modern student's quality of life monitoring.

This study has already been carried out with the financial support of the RSNF and the Orenburg Region Administration. The Regional competition RC 2012 the Ural: the Orenburg Region, the Project № 12-16-56002 a/U: «The New Analytical Interactively System Development for the Social Significant Diseases Monitoring and the Psychosomatic Complications Correction, due to the Disadaptive Behavior in the New Educational Environment of the Orenburg Region Students».

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The work was submitted to International Scientific Conference «Modern sociology and education», the United Kingdom (London), 20–27, October, 2012, came to the editorial office on 18.10.2012.

THE STUDENT'S INDIVIDUAL PERSONALITY PROFILE ON THE EMOTIONAL TENSION LEVEL AND ADAPTATION IN GENERAL

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The main methods of the students' physiological state determination, having studied individual characteristics, and the students' adaptation mechanisms to the educational activities, the emotional intensity dynamics, that is depended on the individual's some individual properties in the special environments have been discussed in the paper. All these studies' results, despite of the high stress load, have been shown no adverse physiological reactions at the students. The human organism, through various adaptive response, has been compensated the high load during training at the University.

The one – time cross sectional study and examination of 254 young men and women, the students, at the age of 17–21 years, having studied at the first and the fifth courses in the city of Orenburg, and in the Orenburg State University branch in the town of

Buzuluk, not having had the somatic pathology, and also having matched for their age and sex groups, have been carried out by us. So, the examined students have been divided into the special groups: the 1-st group – the young girls of the I course (e.g. $n = 36$); the 2-nd group – the young girls of the 5-th course (e.g. $n = 32$); the 3-rd group – the young men of the 1-st course (e.g. $n = 28$); the 4-th group – the young men of the 5-th course (e.g. $n = 36$); the 5-th group – the urban students (e.g. $n = 74$); the 6-th group – rural students (e.g. $n = 48$); the 7-th group – the total sample (e.g. $n = 254$). The students' cross sectional study and examination have been consistent with the Declaration of Helsinki by the ethical standards [5]. So, the exclusion criterion has been the student's illness during the period of the cross sectional study and examination. The computer «NS – Psychotest» complex (e.g. LLC «Neurosoft», Ivanovo, Russia) has been used for the integrated assessment of the efficient psychophysiological state. A number of the psychophysiological techniques has been used: the simple visual – motor reaction (SVMR), the complex visual – motor reaction (CVMR), the response to a moving object (RMO); the noise immunity, the Schulze – Platonov test has been used for the reaction and the attention rate assessment, the G. Izing test – enquiry, it has made it possible to be estimated the extroversion, the introversion performance, and the individual's personal characteristics. The eight – color Lusher test in the adaptation of L. Sobchik has been included in the diagnostic battery, mainly, in order to be provided the relations color test [4], the results of which will be considered, as much more significant and the informative ones, than the actually color – preference [1, 2].

The «physiological response to the stress» test has also been used in the study, by which it has been revealed, that the occurrence average frequency of the physiological responses to the stress is characterized for all the groups, and there is the small chance of the occurrence for the psychosomatic illnesses for the students. So, the low incidence of the physiological responses to the stress has been found in the young men groups of the first and the fifth courses, namely, they do not have any risk of the occurrence for the psychosomatic illnesses for the students. So, the correlation analysis results at the students have already been demonstrated the quite unfavorable influence and the adverse effect of the psychophysiological parameters changes on the affective status, the physiological response to the stress, and also the attention. So, the total deviation index from the standard (TD) has been shown the unproductive tensions increased level at the overwhelming majority of the students quite in all the groups with the excitation excess level, and with the unbalanced nervous processes. And that in the stressful situations is the prerequisite for the psychophysiological deviations emergence from the sample average performance standard rates, and it quite may be the disadaptation manifestation.

The vegetative factor (e.g. KB) quite in all the groups has had the positive sign from $0,98 \pm 0,12$ up to $1,57 \pm 0,05$. This is indicated the sympathetic nervous system tonus predominance, that is the all the functions mobilization, the preparation for the active protection at the students of all the examined and the studied groups. So, the personal properties balance (JБ) has had the positive sign from $0,85 \pm 0,49$ up to $2,91 \pm 0,7$ ($p_{1-4} < 0,05$) quite in all the groups, however, it has been statistically higher in the young men group of the first $2,66 \pm 0,87$ ($p_{1-3} < 0,05$) and the fifth courses $2,91 \pm 0,7$ ($p_{1-4} < 0,05$), that is has been indicated the individual's instability, and his inconsistency, exactly, at the males. So, the comparative evaluation of the emotional status has been shown, that the young men's emotional status has been quite more unstable. Thus, the carried out examination has been allowed to be revealed the students risk group, who, at this stage, are outlined the adaptation failure processes. That is why, it is required the additional monitoring for all these students' physiological state.

Thus, different degree of the adaptation to the Institute of higher education, the College and the University education has been revealed, during the indicators study of the students' psycho – emotional state just in the period of the learning process adjustment. This is, apparently, connected with the quite different and the various levels of the nervous system maturity, which is indicated the individual approach need to the learning process, the psychological state correction, the starting conditions variety creation for each student's development and the further his learning. Thus, our researches are resulted in the hypothesis, that the affective psychophysiological status disorders are the well – known dependence reflection of the higher integrative functions constructions realization. The features and the specific characters, such as the brain performance, the nervous processes mobility, the emotionality, and the anxiety are being played the significant role in the adaptive response organization. They are largely determined the psychophysiological adaptation forms and the coping strategies shapes at all the stages of the adaptation process of the students' learning activities.

This study has already been carried out with the financial support of the ПГФФ and the Orenburg Region Administration. The Regional competition RC 2012 the Ural: the Orenburg Region, the Project № 12-16-56002 a/U: «The New Analytical Interactively System Development for the Social Significant Diseases Monitoring and the Psychosomatic Complications Correction, due to the Disadaptive Behavior in the New Educational Environment of the Orenburg Region Students».

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The work was submitted to International Scientific Conference «Fundamental and applied research in medicine», France (Paris), 14-21, October, 2012, came to the editorial office on 18.10.2012.

THE KIDNEYS' CYTOMORPHOLOGICAL STATE UNDER THE INDUSTRIAL POLYMETALLIC DUST INFLUENCE

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The structural condition research of the experimental animals' kidney tissue (e.g. rats) under the inhalation influence of the polymetallic ore dust of Temirtau has been conducted. The non-purebred white rats-males and pregnant females, in quantity of 108, weight is 180–220 grams, have been used in the experimental work, the animals have been on a standard diet. The level control of the rats' kidneys defeat has been carried out under the cytomorphological condition. The chronic illness of kidneys model (which has been caused) reproduced, according to the standard techniques, has been used in the work. These animals have been contained under the vivarium conditions of the National center of hygiene and occupational diseases factory in Karaganda. The level control of the rats' kidneys defeat has been carried out under the cytomorphological condition. The experiment has been lasted for 3 days, 70 days and 4 months, the experiment duration has been defined by time of the tissues' cellular updating.

The Central Kazakhstan – is the large and the major industrial Region, where a lot of companies and the enterprises have already been concentrated on the metals' mining and its processing [1].

So, the anatomical and physiological peculiarities and their characteristics of the kidneys: the high blood flow, the complex and the renal tubular transport processes, the renal route of the elimination of a large number of the metabolites – they are made the human organ extremely vulnerable at the prolonged exposure to dust on the human organism.

In this connection, it is necessary to be determined the etiological significance of the dust factor in the occurrence of the renal disease and their pathology under the experimental conditions, and up to date there is no any information on the early stages of the cytomorphological changes of the

kidney tissue cells, when they are exposed to the adverse and the quite unfavorable factors of the industrial dust.

The purpose of the work is the structural condition of the kidneys tissue study of the experimental animal (e.g. rats) under the inhalation influence of the of the polymetallic ore dust of Temirtau.

The Materials and Methods of the Study. The study of the possible adverse influence and the unfavorable effects of the metal complex in the dust composition on the children organism of the Temirtau town has been held during the special toxicological experiment. So, the special feature and its peculiarity of this dust is that it is highly fibrogenic (e.g. $\text{SiO}_2 > 70\%$), it, moreover, is contained more than 30 metal compounds and the natural radionuclides of the uranium and the thorium families, in excess of ПДЧ in 3 times [2].

So, the level control monitoring of the kidneys damage in the rats has been carried out on the cytomorphology state. Then, the animals of the I-st experiment have already been divided into 2 main groups:

The 1-st group – is the control one, it has been included 16 animals (e.g. the intact ones), the 2-nd group – 20 animals, which have been administered the Temirtau dusk by the intratracheal way, at 50 mg/ml a dose. The term – is 3 days (e.g. 72 hours) (it is the acute experiment). So, the control group has also been consisted of the 16 intact animals in each subsequent experiment

The II experiment – the 20 animals, which have been poisoned by the subacute industrial dust of the Temirtau town, at 50 mg/ml a dose by the intratracheal way. The term – is 3 days (e.g. 72 hours).

The III experiment had been lasted 4 months (e.g. 120 days), when the rats received the dust in the inhalation chamber at the concentration of $0,25 \text{ mg/m}^3$, that it is exceeded the daily average dust concentration in 5 times (MPC – $0,05 \text{ mg/m}^3$), and it is corresponded to the real dust load for the residential areas of the town. The study group has been consisted of 20 animals.

The powder substances dispensers, having permitted to be taken into account the aerodynamic laws of the dust flow distribution and simultaneously to be subjected exposure to the large group of the animals, have been used for the dust low concentration to be created in the chamber poison.

So, the kidney tissues of the experimental animals have already been by the cytomorphological study material.

Thus, the experimental part of the work has been conducted at the National Center for the Occupational Health or the Labor Hygiene and the Occupational Diseases in the Karaganda town in the framework of the R & D SC HT (GT) and CT on the theme: GR № 0106PK00241 «The Medico – Biological Monitoring Biomarkers Development for Hygienic Safety of the Population Provision in the Terms of the Ecological Trouble».

The Results and Discussion. Before one can be judged on the possible changes nature in the kidneys, the kidney tissue morphology of the animals from the control group has already been studied.

So, the white rats have already been selected by us in our experiment, because they are the most resistant to the toxic metals, and they are much easier to be reproduced the long – termed chronic intoxication in the small doses of the chosen xenobiotics.

At the dose of 50 mg/ml, in the period of 3 days (e.g. 72 hours), just after the Temirtau polymetallic dust poisoning in the rats' renal tissue, the pathological processes have already been revealed, in the form of the further reduction in the number of the small tubular cells (STC) in 2 times, the further increase in the number of the neutrophilic leukocytes (NL) in 6 times, and the further increase in the number of the fibroblasts in 2 times.

It had also been revealed the further increase in the number of the degenerated small tubular cells (DSTC) in 3,1 times at the pregnant females in the kidney cells, in the period of 3 days (e.g. 72 hours), at the dust dose of 50 mg/ml, which was more frequently met the albuminous degeneration or the proteinosis, but more pronounced changes have already been observed in the cellular composition of the renal tissue at the males, and they were acutely sensitive to the toxic effects and the adverse influence of the Temirtau polymetallic dust. It has also been revealed the further increase in the number of the DSTC in 4,2 times, the degenerated neutrophilic leukocytes (DNL) in 1,8 times, the fibroblasts in 2 times, at the males in the kidney cells, in the period of 3 days (e.g. 72 hours), at the dust dose of 50 mg/ml, that it is suggested on the pathogenic effect of the polymetallic dust, under the influence of which the enhanced dissolution of the large tubular cells (LTC) and STC at the males and the females of the studied group is also taken its place.

It had also been revealed the further increase in the number of DSTC in 1,5 time at the pregnant females in the kidney cells, in the period of 70 days (e.g. 1,680 hours), at the dust dose of 50 mg/ml, but more pronounced changes were found and observed in the kidney cells of the males. It had also been revealed the pathological processes, in the form of the further reduction in the number of STC in 1,9 time, the further increase in the number of DSTC in 2,3 times, the number of the fibroblasts were increased in 10 times at the dose of 50 mg/ml, in the period of 70 days (e.g. 1,680 hours), after the poisoning by the Temirtau polymetallic dust in the kidney tissue of the male rats.

It is being observed the further increase in the number of DSTC in 77% after the intratracheal poisoning by the Temirtau polymetallic dust in the kidneys of the animals, when the dose of 50 mg/ml receiving, in the period of 70 days (e.g. 1,680 hours), which is indicated, that along with the albuminous degeneration or the proteinosis, and the presence of the dystrophic – generatively changes.

It has also been revealed the further increase in the number of DSTC in 2,3 times and the further increase in the number of the fibroblasts in 13 times at the pregnant females in the kidney cells, in the period of 4 months (e.g. 120 days), at the dose of the Temirtau polymetallic dust of 0,25 mg/m³, in comparison with the control group of the animals, which are quite characterized for the dystrophic – generatively changes. It has also been found more pronounced changes in the composition of the degenerative cells at the pregnant females with the chronic poisoning in the period of 4 months (e.g. 120 days), at the dose of the Temirtau polymetallic dust of 0,25 mg/m³, in comparison with the males, and it is indicated on the depletion of the compensatory mechanisms of the pregnant females' organism and, moreover, on more rapid development of the sclerotic processes in the kidney tissue of the animals.

The number of fibroblasts (e.g. the connective tissue further proliferation of the intermediate cells) has been increased in 13 times just after the inhalation of the Temirtau polymetallic dust in the kidneys of the animals, at the dose of 0,25 mg/m³, in the period of 4 months (e.g. 120 days), which is indicated, that the sclerotic processes in the kidney tissue of the animals.

It has been marked the very delicate zone of the nephrogenic tissue and the nephrons' low content of the first generations in the juxtglomerular zone at the histological examination of the rats' kidneys after the inhalation poisoning by the Temirtau dust, in the period of 4 months (e.g. 120 days). From the side of the kidney cells, the structural changes are being observed, in the form of the single glomerular cysts presence with the vascular cell collabirovation or the mesangial cells proliferation with the glomerules vascular loops fragmentation. So, the greatest changes have been noted in the tubular system of the nephron, in the form of the severe – pronounced vacuolar dystrophy of the tubular epithelium and with the foci of its necrosis.

Thus, the cytomorphological studies of the kidney tissues of the rats, having carried out by us, have been shown, that the Temirtau polymetallic dust is possessed more pronounced cytotoxic effect. In the acute experiment, it is characterized more pronounced cytotoxic, but in subacute experience, the chronic inflammatory process in the urinary excretion system is caused the renal cells morphology. In the early stages, the poisoning by the Temirtau polymetallic dust has the moderately toxic effect and the adverse influence. The sharp decline in the cells' resistance is suggested on the pathogenic effects and the adverse influence of the dust factors action. So, the enhanced and the amplified nephrons' decay has been taken its place under the influence of the phagocytized dust particles.

All the dust samples have been decreased the nephrons' total content at the experimental rats that is attributable to the further growing number of the destructive cells.

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The work was submitted to the International Scientific Conference «Fundamental research», Israel (Tel Aviv), 16-23, October, 2012, came to the editorial office 13.09.2012.

THE IMMUNE STATUS AND VASCULAR BED STIFFNESS INDICES AT THE RHEUMATOID ARTHRITIS PATIENTS DURING THE INFlixIMAB THERAPY

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The indices study results of the cytokine status in the blood serum, and the functional state parameters of the vascular wall and its dynamics during the infliximab medical treatment at the 38 patients with the advanced stages ACCP – negative variant of the rheumatoid arthritis have been presented in the given paper. So, the significant increase in the serum concentration of the proinflammatory cytokines (e.g. TNF- α , IL-1 β , IL-6, IL-8, and IL-17) at the patients with the RA advanced stage, compared with the control group, has been found. The significant decrease at all the examined RA-pulse wave propagation time, the stiffness and the augmentation indices increase, having reflected the vascular wall elasticity decrease patients, have been revealed. The pulse wave velocity (PWV) determination has been shown its further increasing up to $14,2 \pm 1,2\%$ (e.g. $p < 0,05$), that it is indicated in the arterial bed stiffness increase at the examined RA patients. The multivariate correlation analysis carrying out has been shown, that there is the significant inverse correlation between the pulse wave propagation time, the IL-1 β , IL-6, IL-8, IL-17, TNF- α serum concentration, and the direct one – between the proinflammatory cytokines, the pulse wave velocity (PWV), and the augmentation index at the deployed RA patients. So, the infliximab medical therapy is associated with the content significant reduction of the IL-1 β , IL-6, TNF- α , IL-8, IL-17 blood serum, the stiffness decrease and the vascular wall elasticity increase (e.g. by the lower pulse wave velocity, by the augmentation and the stiffness indices) at the RA patients.

The rheumatoid arthritis (RA) is one of the most common and wide – spread chronic inflammatory diseases in the humans; it is characterized by

the symmetrical chronic erosive arthritis (e.g. the synovitis) of the peripheral joints and the systemic immuno-inflammatory visceral injuries [4]. As the important and the significant challenge, in this pathology condition, the premature mortality rate is considered (e.g. up to 50% of the cases) from the cardio-vascular system diseases, having caused by the atherosclerotic vascular disease (e.g. the myocardial infarction, the congestive heart failure, the sudden death, the acute ischemic stroke), having developed for 10 years earlier, than in the population [8]. So, the cardio – vascular events (CVE) risk at the RA is quite significantly higher, than in the general population, and at the patients, having suffered from the diseases with the proven high – level cardio – vascular risk (e.g. the diabetes mellitus and the arterial hypertension) [8,9,11]. The CVE development risk increase at the RA is associated with the immuno – inflammatory mechanisms, having underlied in the basis of the RA pathogenesis and the atherosclerosis [2]. So, it is believed, that the inflammation, having contributed to the lipids deposition in the vascular wall, is the significant pathogenetic factor «destabilization» of the atherosclerotic plaque and the atherothrombotic complications [11]. It has been shown, in the recent years that the high frequency of the «subclinical» atherosclerotic vascular disease is characterized for the RA. The endothelium dysfunction, the small and the large vessels of the elasticity decrease, the systemic vascular resistance increase are reflected the earliest stage of the atherosclerotic vascular disease, and they have already been detected the RA onset, though these changes degree manifestation is practically increased with the disease duration further increasing.

The atherosclerosis development and the increased risk of the premature death at the RA are associated with the extra – articular manifestations, the disease progressive course, the inflammatory process activity, and the sulphur-positivity for the RF. However, in the overwhelming majority of the cases, the cardio – vascular complications are further developed at the RA patients, with the low or the moderate risk, according to the traditional factors risk, that is why the pressing challenge of the new predictors finding out of their occurrence is the most actual one [2, 11].

The effective anti – inflammatory therapy carrying out is played the important role in these complications prevention, having taken into consideration the chronic inflammation and the autoimmune disorders place, in the atherosclerosis development and the CVE related with it at the RA [6].

Recently, the genetically engineered biological agents (GEBA) are successfully used, that are permitted to be controlled the immuno-pathological processes further development for the patients' medical treatment with the RA high level activity [7]. However, up to the present time, there is no clear understanding and its presentations on the genetically

engineered biological agents (GEBA) operation on the cardio – vascular system, since the data inconsistencies and also the insufficient knowledge of the development mechanisms, and the cardio – vascular diseases progressiveness at the RA [7, 9].

Therefore, the absolute practical – scientifically interest is presented the further study, as the immune status and the arterial stiffness indices relationship, well as the GEBA cardio – vascular effects, including infliximab, which may be of the great practical significance not only to be highlighted the high risk groups of the cardio – vascular pathology disease at the RA patients, but it is enable to be personalized the whole therapy, to be reduced the cardio – vascular complications occurrence frequency, and also to be improved the life quality, and the prognosis of this category patients.

This present study **main purpose** has been to be examined the relationship between the pro-inflammatory cytokines level (e.g. TNF- α , IL-1 β , IL-6, IL-8, and IL-17) and the vascular wall stiffness at the RA patients, and their dynamics during the infliximab medical therapy.

The Materials and Methods. The 38 patients have been under their observation with the advanced stages of the rheumatoid arthritis, from the moderate up to the high level disease activity; the RA duration has not been exceeded 2 years (e.g. 24 months). So, the patients' average age has been made up $32,6 \pm 8,5$ years (e.g. 390 ± 102 months). The patients' inclusion criteria into this study have been the following: the RA presence 2–3 degrees of their activity, the ACCP – negative variant of the disease, the evidence availability, and the contraindications absence for the infliximab to be used, the patient's informed consent presence for the further inclusion into the study. The patients' exclusion criteria from this study have been the following: the Ra 1 activity degree, the ACCP – positive variant of the disease, the infectious processes of any localization, the diabetes mellitus, the liver and the kidney dysfunction diseases, and the congestive heart failure. So, the rheumatoid arthritis diagnosis has been prescribed, in accordance with the «ACR/EULAR» criteria, 1987/2010. The RA general activity and the functional class (FC) have been determined, according to the RA classification, having adopted at the Plenary Session of the Russian Rheumatologists Association in 2007. So, the RA activity quantitative assessment has been carried out with the DAS 28 (Disease Activity Score) index use, having recommended by «EULAR» [4]. The «EULAR» criteria have been used, having based on the «DAS 28» index dynamics, to assess the therapy effectiveness.

So, the content in the TNF- α , IL-1 β , IL-6, IL-8 blood serum has been measured by the immune – enzyme analysis with the test systems use (e.g. the «Protein Contour» LLC, the Saint – Petersburg city), the IL-17 – by the solid – phase immune – enzyme analysis sandwich – option method with the «R&D Diagnostics Inc.» (USA) firm reagents use, the TGF- β 1

has been determined by the immune – enzyme method (e.g. («Amersham Pharmacia Biotech»).

The investigation of the vascular wall state parameters has been evaluated by means of the daily arterial blood pressure (ABP) monitor of the «Peter Telegin» company of Nizhny Novgorod city and the «BPLab®» software. So, the following parameters have been determined: TPWP – the time pulse wave propagation (ms); ASI – the arterial wall stiffness index; AIx – the augmentation index (%); SAI – the systolic area index (%); PWV (cm/sec) – the pulse wave velocity (e.g. it has been calculated by the formula:

$$PWP = \frac{l_{Ao} + l_{av}(ASc + AA + 1/3 AB)}{TPWP},$$

where l_{Ao} – the distance between the aorta mouth and the subclavian artery, having measured sonographically; $l_{av}(ASc + AA + 1/3 AB)$ is the total length of the subclavian axillary and the one third shoulder.

The biochemical and the functional studies methods had been carried out by the conventional methods and the generally accepted methodologies, that was allowed to be evaluated the various organs function, to be identified the comorbidities and the concomitant diseases.

Thus, the 20 practically healthy persons at the age of $42,5 \pm 6,4$ years (e.g. 509 ± 76 months), having made up the control group members, have been included in the study, for the parameters' comparative evaluation of the cytokine status and the vascular wall stiffness.

The cytokine status evaluation and the vascular wall stiffness parameters have been determined just before the medical treatment after the 12 months of the infliximab therapy.

So, the basic anti – inflammatory therapy of the patients has been included the methotrexate $11,8 \pm 8,2$ mg/week, prior the infliximab medical treatment. The infliximab has been administrated into/venously infusion dripily by 200 mg/day, according to the recommended scheme: 0, 2, 4, 6 weeks, then every 8 weeks during the 12 months.

So, the digital data statistical processing has been produced with the «Microsoft Excel» applied programs standard package and the «STATISTICA 6.0» for Windows. The quantitative variables statistical analysis has been based on the difference of the average arithmetical populations. In the case of the two independent samples, the t – Student test criterion with the variance separate evaluation for the independent groups has been used. The Pearson's linear correlation coefficients have been calculated to be evaluated the relationship between the quantitative parameters. So, the Student and Wilcoxon tests criteria have already been used to be assessed the indices changes validity during the medical treatment.

The Results and Discussion. It is quite well – known, that the cytokines are involved, and they are taken part in the inflammation, the hematopoiesis,

the immunocompetent cells' differentiation and its further growth, the immunoregulation, the lymphocytes' chemotaxis processes regulation [6].

The synovial tissue is the main synthesis site, as the main pro-inflammatory, well as some anti-inflammatory cytokines at the RA, while their concentration density is increased, as in the synovial fluid, well as in the blood serum [3, 10].

It should be noted, that these immunological markers of the atherosclerosis, as the TNF- α , IL-1 β , IL-6, and the others, on the one hand, are the atherothrombotic complications «predictors», and they are associated with the traditional risk factors of the cardiovascular diseases, on the other hand, – they are reflected the chronic inflammatory process course at

the RA [2]. Therefore, it has been interesting to be determined the TNF- α , IL-1 β , IL-6, IL-8, and IL-17 content in the blood serum of the RA patients.

Thus, the study results have already been shown the significant increase in the TNF- α , IL-1 β , IL-6, IL-8, and IL-17 concentration at the patients with the advanced RA stages, in comparison with the control group members (Table 1). The content in the blood serum at the RA patients in the TNF- α $5,1 \pm 0,6$ times (e.g. $p < 0,05$); in the IL-1 β – $4,3 \pm 0,7$ times (e.g. $p < 0,05$); in the IL-6 in $9,6 \pm 0,9$ times (e.g. $p < 0,05$); in the IL-8 in $8,1 \pm 0,6$ times (e.g. $p < 0,05$); in the IL-17 in $4,6 \pm 1,1$ times (e.g. $p < 0,05$) has been higher than the control level.

Table 1

The Pro-Inflammatory Cynokines Content Dynamics in the Blood Serum of the Advanced RA Patients During the Infiximab Therapy

Indices (pkg/ml)	Control (n = 20)	RA Patients	
		Before treatment (n = 38)	After the infiximab therapy (n = 38)
	1	2	3
TNF- α	$32,4 \pm 3,6$	$216,7 \pm 18,2^{*1}$	$94,2 \pm 10,4^{*1-2}$
IL-1 β	$35,4 \pm 4,1$	$148,2 \pm 12,9^{*1}$	$98,2 \pm 9,6^{*1-2}$
IL-6	$15,8 \pm 3,9$	$128,5 \pm 11,2^{*1}$	$76,4 \pm 8,8^{*1-2}$
IL-8	$8,8 \pm 2,4$	$37,6 \pm 3,8^{*1}$	$18,9 \pm 2,4^{*1-2}$
IL-17	$7,8 \pm 1,2$	$31,4 \pm 1,8^{*1}$	$24,1 \pm 1,6^{*1-2}$

Note. The significant differences of the arithmetic averages (e.g. $p < 0,05$) have been indicated by the asterisk (e.g. *), the numbers next to the asterisk – in relation to that group indices some of these differences are the significant ones.

The elastic – flexibly properties study of the vascular wall has been shown the significant decrease at all the examined RA patients, in comparison with the control pulse wave propagation time (PTT) – for $28,1 \pm 1,6\%$; the increase stiffness index (ASI) –

for $24,3 \pm 2,8\%$ (e.g. $p < 0,05$), the augmentation index (AIx) – $64,8 \pm 5,8\%$ ($p < 0,05$), SAI – the systolic area index – for $21,4 \pm 1,1\%$ ($p < 0,05$), which is characterized the vascular wall elasticity decrease (Table 2).

Table 2

The Vascular Wall Stiffness Indices Dynamics at the RA Patients During the Infiximab Treatment

Parameters	Control (n = 20)	RA Patients	
		Before treatment (n = 38)	After the infiximab therapy (n = 35)
	1	2	3
PWPV (sm/sec)	$117,8 \pm 14,5$	$148,4 \pm 6,8^{*1}$	$132,3 \pm 6,4^{*1,2}$
PTT (ms)	$164,5 \pm 2,4$	$122,4 \pm 11,4^{*1}$	$136,1 \pm 9,1^{*1,2}$
ASI	$37,3 \pm 5,1$	$49,6 \pm 3,1^{*1}$	$42,5 \pm 4,8^{*1,2}$
AIx (%)	$-30,9 \pm 4,2$	$-10,6 \pm 1,1^{*1}$	$-16,8 \pm 1,6^{*1,2}$
SAI (%)	$54,8 \pm 2,3$	$66,3 \pm 2,4^{*1}$	$58,4 \pm 1,6^{*1,2}$

Note. The significant differences of the arithmetic averages (e.g. $p < 0,05$) have been indicated by the asterisk (e.g. *), the numbers next to the asterisk – in relation to that group indices some of these differences are the significant ones.

The pulse wave propagation velocity (PWPV) determination, which is characterized the vascular bed stiffness, and it is considered, as the integral indicator of the cardiovascular risk, had been shown its further increase for $14,2 \pm 1,2\%$ (e.g. $p < 0,05$), that it is indicated on the arterial channel stiffness further increase at the examined RA patients.

So the multivariate and the multi-factor correlation analysis carrying out has been established the significant direct correlations and the correlative relationships presence between the IL-1 β and the AIX (e.g. $r = 0,46$, $p < 0,05$); the IL-6 and the AIX (e.g. $r = 0,48$, $p < 0,05$); the TNF- α and the AIX (e.g. $r = 0,51$, $p < 0,05$); the IL-8 and the AIX (e.g. $r = 0,41$, $p < 0,05$); IL-17 and the AIX (e.g. $r = 0,39$, $p < 0,05$) correlations, the inverse correlation dependences have already been determined between the level in the blood serum IL-8 and the RTT (e.g. $r = -0,57$, $p < 0,05$), the IL-17 and the PWPV (e.g. $r = -0,54$, $p < 0,05$), the IL-1 β и the PTT (e.g. $r = -0,43$, $p < 0,05$), IL-6 and the PWPV (e.g. $r = -0,61$, $p < 0,05$), the TNF- α и PTT ($r = -0,57$, $p < 0,05$), which is allowed to us to be considered the pro-inflammatory cytokines hyper-expression, as the one from the mechanisms of the stiffness progression and the elasticity decrease of the arterial bed at the RA. So, it should to be mentioned, that such cytokines, as the IL-17, IL-1 β , IL-6, TNF- α , and the IL-8 are the chronic inflammation markers of the vascular wall, their assessment is allowed to be identified the individuals with the high risk of the cardiovascular complications development [2].

It is well – known, that the TNF- α is played the significant role in the inflammatory response and the cytokine cascade coordination. This cytokine is practically activated the blood coagulation system, it is enhanced the trombogenic and the vasoconstrictor endothelium activity, it is reduced the NO synthesis, it is activated the RAAS, and it is potentiated the ET-1 formation by the endothelial cells. The TNF- α is the strongest incentive for the IL-1 β production, which is the major development mediator, as the local inflammatory response in the vascular wall, as well as the acute – phase response at the organism level [1].

The IL-1 β is synthesized by the macrophages and by the monocytes, and also by the vascular endothelial cells. The IL-1 β is practically exhibited the wide range of the local and the systemic effects, which are included the following: the T- and B-lymphocytes activation, the synthesis induction of the adhesion and the IL-8 molecules [3]. Therefore, the IL-1 β increase is the essential mechanism of the endothelial dysfunction progression, which is the leading cause of the elastic – flexibly properties of the vascular bed.

Among the IL-6 multitude effects, it should to be mentioned its role in the systemic inflammation, as the major mediator of the acute phase, having stimulated the production in the inflammation secondary participants' hepatocytes – the acute phase

proteins: the C-reactive protein (CRP), the A amyloid, the apolipoprotein- α , the fibrinogen, and the compliment components. So, the IL-6 significant property – is the blood procoagulant activity further increase. The IL-6 serum level is practically reflected the inflammatory process activity in the systemic blood flow circulation, and it is the progostic criterion of the cardiovascular complications [3].

In its turn, the IL-17, having produced by the T-cells (e.g. CD4 +), is exhibited the highly expressed inflammatory activity, it is able to be induced the various mediators inflammation synthesis, including the TNF- α , IL-1, the IL-6, and the IL-8, thereby, having contributed to the autoimmune pathological reactions development, including the inflammation induction at the rheumatoid arthritis (RA). Then, it has been revealed the IL-17 capability to be activated the IL-1 and the IL-6 expression, having possessed the destructive potential in the inflammatory process, as well as the metalproteinaz (e.g. MMP-9) expression, having resulted in the tissue modeling, and the degradation production release of the II type collagen. And, moreover, it has been found out the IL-17 role in the chondrocytes and the synoviocytes regulation, the granulopoiesis stimulation [3, 10].

So, these above-indicated mechanisms are potentiated the immune inflammation activity of the arteries walls, the endothelial dysfunction progression, which is increased the vascular bed stiffness increase at the rheumatoid arthritis (RA) patients.

The medical treatment results assessment showed, that at all the examined patients during the infliximab use the positive clinical dynamics had been achieved, having characterized by the «good response» presence to the medical treatment (e.g. DAS28 < 3,2) at 78,9% (e.g. 30 persons); the remission (e.g. DAS28 < 2,6) has been identified at the 5 patients (e.g. 13,15%), the moderate disease activity (e.g. 3,2 > DAS28 < 5,1) had been saved, and it had been lasted, totally, at the 3 (e.g. 7,95%) patients.

Thus, the laboratory indices study and its parameters reserch just after the carried out infliximab therapy the significant level reduction of the pro-inflammatory cytokines had been established: the TNF- α concentration decreased in $2,6 \pm 1,1$ times, the IL-1 β – for $66,4 \pm 3,2\%$ (e.g. $p < 0,05$), the IL-6 – in $2,1 \pm 0,6$ times, the IL-8 – for $19,9 \pm 0,4\%$ (e.g. $p < 0,05$), and the IL-17 – in $1,8 \pm 0,6$ time.

The vascular wall stiffness parameters study, after the infliximab therapy, has been revealed the significant increase in the time pulse wave propagation (TPWP) for $14,5 \pm 2,1\%$ (e.g. $p < 0,05$). It has also been achieved the significant increase in the augmentation index (AIX) for $1,2 \pm 0,4$ time, and the area stiffness index (ASI) – for $9,7 \pm 1,4\%$ (e.g. $p < 0,05$), having determined the vascular wall elasticity.

It has been found out the significant decrease the PWPV for $17,4 \pm 1,4\%$ (e.g. $p < 0,05$) at the RA patients after the infliximab therapy. It should to be

mentioned, that the PWPV is the strongest predictor of the cardio-vascular mortality at the patients not only with the cardiac pathology, but at the RA [9]. The PWPV is directly depended from the arterial elasticity and its stiffness: the greater vascular wall stiffness, and lower its elasticity, the higher the PWPV, and, correspondingly, less the PTT. In our study, at the patients with the advanced stages ACCP-negative RA option, under the infliximab therapy influence, along with the high level clinical efficiency, the level reduction in the blood serum of the pro-inflammatory cytokines had been achieved, that it was accompanied by the arterial bed stiffness decrease, and the elasticity increase, and it was potentially associated with the risk reduction of the heart vascular complications development.

Thus, all these received data are supported the assumption, that the TNF- α biological effects neutralization has the beneficial impact upon the arterial vessel wall condition, and, consequently, it may be reduced the occurrence risk of the various cardio-vascular pathology disease at the ACCP-negative form of the RA.

The Conclusions

1. At the advanced stage of the ACCP-negative RA version violations of the structural and the functional properties of the arterial bed are usually characterized by the elasticity decrease (e.g. the augmentation and the stiffness indices increase), and by the stiffness increase (e.g. the pulse wave propagation velocity increase).

2. At the patients with the advanced stages of the ACCP-negative RA version is taken its place the significant inverse correlation between the time pulse wave propagation, the increase in the serum IL-1 β , IL-6, IL-8, IL-17, and the TNF- α concentration, and the direct correlation – between the inflammatory cytokines, the rise pulse wave velocity, and the augmentation index.

3. The infliximab therapy at the patients with the ACCP-negative RA version, along with the clinical

efficiency, is accompanied with the content significant reduction in the blood serum IL-1 β , IL-6, TNF- α , IL-8, IL-17, the stiffness decrease, and the vascular wall elasticity increase (e.g. the lower pulse wave velocity, the augmentation index, and the stiffness).

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The work was submitted to International Scientific Conference «Fundamental and applied research in medicine», France (Paris), 14-21, October, 2012, came to the editorial office on 14.10.2012.

Short Reports

THE ROLE OF IMMUNE INFLAMMATION IN PROGRESS OF DIABETIC NEPHROPATHY

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Pancreatic diabetes is a serious medical-social problem, it is dependent by its wide spread, a trend to increase in sickness rate, high disability rate of the sick of capable age. We should outline that diabetic nephropathy (DN) is one of the most frequent and prognostic – infavourable complications of pancreatic diabetes (PD). During the latest year DN occupies leading positions among the causes of terminal renal insufficiency. We should underline that uraemia is the most frequent, after heart-vascular catastrophes, cause of death of patients with PD of the 2nd type. Unsatisfactory results of DN treatment are linked to the difficulty of pathogenesis, a continual asymptomatic flow, late diagnostic [1].

According to modern views, the leading part in forming DN is played by hyperglycemia and the linked disruptions in metabolism [4]. During the last decade participation of immune-inflammatory mechanisms in development of diabetic kidney damage is discussed. Regardless of numerous studies, many mechanisms of DN formation require specification. Particularly, study of role of immune inflammation in forming cardio-nephral continuum proves to be possible. Development of these problems can provide for an optimization of approaches towards prevention and therapy of this pathology.

Research objectives: studying serum concentration and urinal excretion of monocytic chemoattractant protein-1 that transforms growth factor $\beta 1$ (TFR- $\beta 1$), interleukin (IL) – $\beta 1$, contents molecules of inter-cell adhesion SVCAM-1 in blood serum among patients with DN.

Methods and materials. 85 patients with PD of the 2nd type, including 40 men and 45 women at age of 40–55 were studied. Disease continuity up to 5 years was registered for 40 patients, for 45 patients continuity of diabetic anamnesis equaled 6–10 years. An average level of HbA1 among the studied equaled $9,5 \pm 2,9\%$. All patients received capsuled sugar-decreasing medications. Patients' distribution was carried out depending on the stage of DN, according to classification of I.I. Dedov and M.V. Shestakova (2000). All patients were randomized into two groups: the 1st group – 35 patients with albumin stage of DN, the 2nd group – 50 patients with proteinuric stage of diabetic nephropathy.

Study of TFR- $\beta 1$, MCP-1, SVCAM-1, IL-6, IL-1 β in urine and blood serum was carried out via method of immune-ferment analysis. Blood samples of 20 healthy donors served as a control of laboratory research.

Research results and discussions. Arterial hypertension (AH) was revealed among all patients with microalbuminuria. We should outline that for only 5 patients with normal excretion of albumin with urine an increase in arterial pressure was registered. The study of contents of SVCAM-1 and IL-6 in blood serum of patients with PD showed its increase up to $368,3 \pm 92,4$ ng/ml ($p < 0,05$) and $144,3 \pm 8,3$ ng/ml ($p < 0,01$) correspondingly, compared to the control ($265,3 \pm 48,9$ and $13,6 \pm 0,2$ ng/ml correspondingly). A strengthen in expression of SVCAM-1 and IL-6 with the progress of nephropathy, a reliably higher content of SVCAM-1 and IL-6 in blood serum was registered in the group of patients with proteinuria and AH (SVCAM-1 – $403,5 \pm 101,2$ ng/ml, $p < 0,05$, and IL-6 – $184,4 \pm 5,2$ pg/ml, $p < 0,01$, correspondingly). An increase in excretion of SVCAM-1 and IL-6 with a progress of nephropathy, reliably higher contents of SVCAM-1 and IL-6 in blood serum was registered among patients with proteinuria and AH (SVCAM-1 – $403,5 \pm 101,2$ ng/ml, $p < 0,05$, and IL-6 – $184,4 \pm 5,2$ pg/ml, $p < 0,01$, correspondingly). An increased level of SVCAM-1 in blood serum of patients with DN is dependent by hyperexpression of SVCAM-1 and IL-6 – modified cells of endothelium, and reflects both degree of inflammatory reaction in artery walls and a progression in endothelium dysfunction. An increased expression of SVCAM-1 can play an important part in developing nephrosclerosis, providing for migration of inflammatory cells into clews and intersticium. IL-6 regulates the activity of inhibitors of matrix metalloproteinases. Their level defines the contents of extracellular matrix in artery walls. An important characteristic of IL-6 is its impact over pro-agulant blood activity that provides for a formation of later complications of SD [3].

The results of defining initial serum content of IL-1 β and MCP-1 has shown us a reliable increase in their concentration among patients with albuminuric stage of diabetic nephropathy, compared to the control group ($36,1 \pm 6,3$ pg/ml and $112,4 \pm 2,3$ pg/ml, correspondingly). Higher levels of IL-1 β ($89,2 \pm 4,2$ pg/ml, $p < 0,05$) and MCP-1 ($202,2 \pm 5,9$ pg/ml, $p < 0,05$) have been established in blood serum of patients with DN at proteinuric stage of the disease. Definition of urinal excretion volume of IL-1 β and MCP-1 has shown the following results. An increase in urinal excretion of IL-1 β among patients with PD of the 2nd type along with an increase in DN expression was es-

tablished. Among patients with proteinuria contents of IL-1 β in urine was $2,8 \pm 0,2$ times ($p < 0,05$) higher than that of the control and $1,4 \pm 0,2$ times higher than that of patients with albuminuria. An increase in discharge of IL-1 β with urine under PD provides for the support of activity of immune inflammation, an increase in expression of adhesion molecules, chemokins. Fibrogenic effects of IL-1 β in kidney are also known [2]. An increase in MCP-1 concentration in urine among patients with PD ($20,4 \pm 6,2$ pg/mmole), compared to the control ($5,3 \pm 1,2$ pg/mmole) has been registered. We have established a reliable trend to increase in urinal excretion of MCP-1 along with the progress of nephropathy, a higher level of MCP-1 was registered among patients with DN with proteinuria ($58,3 \pm 12,4$ pg/mmole, $p < 0,05$). It is known that endothelium cells represent molecules of VCAM-1, MCP-1 at surface that provide for attraction and transmission of monocytes, activation and generalization of the inflammation in vascular wall. Microphages that migrate into kidney intersticium play an important part in forming tubulointerstitial fibrosis, as they serve as a source of fibrogenic growth factors, particularly TFR- β 1 [2].

Evaluation of urinal excretion of TFR- β 1 has revealed its increase among patients with PD with a progress of nephropathy. The highest content of TFR- β 1 in urine was established among patients with SD with proteinuria протеинурией ($16,4 \pm 4,2$ pg/ml, $p < 0,05$). Study if TFR- β 1 in

blood serum of patients with PD of the 2nd type has shown its increase, compared to the control ($43,6 \pm 4,3$ pg/ml) by $1,4 \pm 0,3$ ($p < 0,05$). Among patients with proteinuric stage of DN its highest serum concentration has been registered ($86,4 \pm 4,2$ pg/ml, $p < 0,05$). Our correlation analysis has shown that level of TFR- β 1 correlated directly with albuminuria ($r = 0,59$, $p < 0,05$) and inversely – with glomerular filtration ($r = -0,33$, $p < 0,05$). It is known that TFR- β 1 is studied as a key mediator of forming nephron sclerosis. Pathogenetic part of TFR- β 1 is linked to an activation of synthesis of collagen and other components of matrix in kidney [1]. We should outline that an increase in TFR- β 1 production under DN is generally defined by a disturbance in kidney regulation of TFR- β 1 levels, as under DN kidney is its major supplier [4].

The received data testify the pathologic part of immune-inflammatory mechanisms in formation of diabetic nephropathy.

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*Materials of Conferences***SUBJECTIVENESS
AND INTERTEXTUALITY:
PROS AND CONS**

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This article aims in making analysis of subjective aspect of intertextuality in the world wide textual field.

As French philosopher, paleontologist and geologist Pierre Teilhard de Chardin once said: «Human spirit lies in our personality not individuality. We all strive for perfecting our individuality, while the true value lies in our personality, which we do have power to stand for» [5].

Introduction. The modern world of cultural artifacts is very rich and developed. It grows daily. It is widely recognized that no phenomena of the contemporary art, no matter how «unique» and «highly-individual» it may be represented is being based on the author's personality only. Modern world of culture tends to be constantly quoting itself. Which is not surprising, assuming our society is highly globalized. It happened even before Mass Media became so powerful throughout the planet. Artistic worlds and its creators, even if preferring to be independent, always happen to be aware of each other's works which, to different extends, is often interinfluencing. These days almost all segments of general thinking seem to be interpenetrative. In the field of science it can be perfectly explainable: no research in any possible area of study can be accomplished (and even started) without being based on the previously made set of works, no matter developing or disproving them completely. The whole history of science is based on the principle of taking into account prior techniques, research and exploration surveys.

However, for literature, a subjective zone of expressing each author's uniqueness, such a paradigm always looked inappropriate. Any work of art is supposed to reflect individual perception of the world described by means of the particular language and the precise resources of this language skilled by the author.

Usually, when comparing literature to science in general, the researchers mention that they both use the means of the language to verbalize their ideas, although the aims of the two are completely different.

Nevertheless, there is a very important aspect both literature and science share: both phenomena are drawn heavily on the basis of all the previous experience. And, returning to the field of literature specifically, it doesn't involve the language itself only.

No text is being born in the modern world without being dependent on the previously created one.

Intertextuality. The phenomenon of permutation of texts in world literature (and other forms of art, for example, cinematography) is being called «intertextuality». The term itself was first brought into linguistics by a French researcher Julia Kristeva in her studies devoted to semiotics of post-modernism in 1967. She defines intertextuality as textual interaction, which takes place in any literary text. For any subject (reader) the phenomenon of intertextuality is an attribute of a specific way of interpretation of the certain history and the way of fitting into it [4]. In Kristeva's further studies it is being underlined, that «intertext» (an object) shall be completely detached from the term «intertextuality» [3]. Kristeva claimed, that intertextuality – being a permutation of different texts – is a characteristic that makes each text «a field inside which a number of certain utterances (narratives) taken from outer texts intercross each other and often neutralize one another». Text, in Kristeva's works, is a certain combinatory area. It is a space of multilevel interchangeable process among the large number of fractions, which again and again are being reallocated by written discourses. Any new text is being created based on the variety of prior precedent texts (which are being deconstructed, denied or regenerated). We may say that for Julia Kristeva intertext itself is not at all a device with a help of which a new text is transcribing or reduplicating a previous one. On the contrary, intertextuality is a constant boundless process, which we shall call textual dynamics.

Roland Barthes developed and adds new theses to Kristeva's theory in his works in 70s. In his academic paper of 1973 he dwells upon the statements mentioned in researches of Kristeva. He brings the terminology Kristeva used in her thesis in the general theory of literary text. Primary position is his paradigm is being held by the phenomenon of «productivity», which is tightly associated with the concept of «intertextuality». Basically, for Barthes text means productivity.

Consequently, literary text, if based on the concept of Kristeva, is initially an intertext. It holds the characteristics of intertextuality not because it owns the elements of borrowing or adoption, deformation, repetition or imitation, but because any written text which produces literary text works on the principle of redistribution, deconstruction and dissemination of the variety of primary works of literature. Summarizing this principle, Barthes writes: «absolutely any literary text is an intertext» [1].

Any literal text is operating as an intertext on several levels. The level of identifiability in it can be differentiated. However, the reader is able to de-

tach from it the essential elements borrowed from the texts of coevals and predecessors, from the history of arts; any text can be looked upon as a sort of cloth being inweaved out of the variety of quotations. As a result an uncertain amount of cultural codes, memorable quotes, fragments of social dialects, rhythmical models, etc. Intertext is an eroded field of anonymous «formulae», the roots of which is not always recognizable. Basically, it is a large area of automatically used quotations, which don't need speech marks in their textual organization.

Summarizing the ideas of Julia Kristeva and Roland Barthes, we can draw a conclusion: intertextuality shall not be considered a repetition or a certain filiation. We may say, however, that the essence of intertext is not only borrowing (quotations of different kinds in the intertextual field are always lack quote marks), but mostly unconsciously usage of barely recognizable traces. Intertextuality, thus, presupposes usage of a crucial «responsiveness» and dynamism of the process of writing itself, which operates as a transposing instrument, working in cooperation with precedent or comprehensive literary uttering.

Laurant Jenny sums up the ideas elaborated by Barthes and Kristeva and brings them into the topic of intertext itself. «Intertext speaks a language, thesaurus and active vocabulary of which is being formed, set up and developed by means of assemblage of the whole number of literary texts existing in the world of literature» [3].

The point of view of the mentioned authors has one very important aspect in common. They all claim intertextuality to be a phenomena which is free from subjectiveness. Barthes writes: «objectivity and subjectivity are of course forces which can take over the text but they are forces that have no affinity with it» [1]. Intertextuality is a purely extensive notion, which operates not only by allusion, parody and stylization, but also by any possible forms of reminiscences, rewriting or other ways of interacting informational blocks which may exist between a literary text and comprehensive language entirety. If literature itself is intertextual, then this process is functioning not only because any sort of written text is «listening» to the precedent literature works, but also because any text exists on the same basis and on the same rights as the whole mass of discourses which surround it. Intertextuality is a text in dynamics, textual permutation and interaction. Any text is productive; it creates its own language.

So, is there any space for subjectiveness in the intertext? Does the author is the one and only initial power that brings this characteristic of literary text on? Or is it just a question of interpretation and the reader is the one who creates the new rendering of the text?

Back To Science. Let's address to the history of science again to answer this question. In the world of science and technology the subject of pro-

ductivity and creativity itself never comes to be the leading factor. This can be easily explained. Let's make a trivial example. It is widely known – the electric light, one of the everyday conveniences that most affects our lives, was invented in 1879 by Thomas Alva Edison. He was neither the first nor the only person trying to invent an incandescent light bulb. However, Edison was neither the first nor the only person trying to invent an incandescent electric lamp. Many inventors had a lot of work and research to invent other devices, very close to the electric bulb as done by Edison. Among those inventors who made a step forward in understanding the eclectic light were Sir Humphrey Davy, Warren De la Rue, James Bowman Lindsay, James Prescott Joule, Frederick de Moleyns and Heinrich Göbel. Besides, a large number of people worked on perfecting the electric bulb and illumination in general. Needless to say, it is being improved and developed now and will be perfected tomorrow.

Basically, the nature of the whole phenomenon of scientific work is successive by its essence. Backward compatibility is one of the most important features of it in the matter of science conventions and progress in general. The names of Nicolaus Copernicus, Galileo Galilei, Isaac Newton, Albert Einstein, Thomas Edison and others are widely known not because of their unique inventions, but because their ideas led directly to the scientific revolutions – change of the way of thinking in general. Let's go deeper into the history and remember the times of Nicolaus Copernicus. Was his invention a real breakthrough? Did he actually invent anything? Well, not exactly. He was the first to notice that inspite of the fact that we clearly see the Sun travelling round the sky, the stars at night stay still on the same place. Thus, he concluded, the Earth is not the center of the Universe. On the contrary, our planet turns round the Sun. We have to admit – he was wrong about many things, mentioned in his works. He claimed the space to have the so-called «finite substance», a sort of a solid wall, on which the stars are being lunched. His ideas were later developed greatly and the whole new worldview came to life. Generally speaking, Copernicus laid the foundation of the large number of future inventions. But his name is a loud one, because thanks to him the whole ideology world outlook and mindset of humanity had been changed. Human being is not the meridian, not the heyday of creation and the Universe!

So, a famous name in scientific history is usually a name of scientific revolutionist. While the scientific inventions, goals and failures are being written collectively. There is no subject in it – the world progress is a world-wide matter, collective success and common heritage. Each new invention is being done being strongly influenced by absolutely all the precedent works.

And Back To Literature Again. But back to the world of literature. The word literature literally means «things made from letters». Those can

be any *things*: all the thoughts of human mind – arranged into a story, claiming facts, fiction or nothing in particular (modernism, postmodernism, futurism in general, considerable part of Asian prose, biggest part of the lyrics, etc.). But, even when we speak about plotless literary works, characteristic of intertextuality shall not be excluded. Any text is being arranged in accordance to the certain number of unspoken rules. Those rules: spelling, punctuation, syntax, word order, morpheme arrangements, stresses, metaphors, stylistics, etc. – are being dictated by the whole history of literature. We can apply those rules to any text – from the phone book to the novel.

How strict shall we be to the factor of author's (or reader's) subjectiveness in this case?

The problem of intertextual subject, or – «inter-subject», is a trace which the theorists of intertextual theory itself have been well aware of.

I. Ilyin in his book «Poststructuralism. Deconstruction. Postmodernism» in 1996 summarizes the ideas stated by the researches who dealt with the intertextuality in their works: Algirdas Julien Greimas, Roland Barthes, Jacques-Marie-Émile Lacan, Michel Foucault, Jacques Derrida and others. Ilyin underlines that those theorists stressed one and the same feature of the language in general: human mind is – if we speak in terms of classic structuralism – «panyazikovoy» (totally *everything* in the world is a **language**) by its nature. We think in terms of a text. Moreover, we think in terms of a written text. How else can we arrange out thoughts? Writing is the only available constructure, known to humankind, that allows us to fix our utterings. Logically enough, in structuralism and constructivism, as well as at the present times of post constructivism, we call «a text» quite a range of phenomena: literature, culture, history, society, a human [6].

The thesis that history of humankind and society in general can be the phenomena which shall be

«read» as a «text» consequently lead to the understanding of world culture as a unified «intertext», which, in its complete variability serves as a preliminary precedent text (pre-text) to any newborn literary text.

The aspect of sovereign subjectiveness of an author (and at some point, a reader) in texts- consciousnesses which act like bricks in the wall of «The Great Intertext of The World» turns to be blurred if not completely vanished. There is no place for subjectiveness in the world of intertextuality. Whatever you are going to write – it's only going to be quotations, allusions, reminiscences, rewriting and stylization. But it doesn't mean that one shouldn't write.

Fine words! I wonder where you stole them.

Jonathan Swift

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The work was submitted to International Scientific Conference «Section of young scientists, students and professionals», Turkey (Antalya), 16-23, August, 2012, came to the editorial office on 04.07.2012.

*Materials of Conferences***PECULIARITIES OF INTERNET
RELIGIOUS DISCOURSE DEVELOPMENT**

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The article deals with an undeveloped problem in the genre studies that is the problem of the range in character of the genres functioning in the religious sphere and the features of system which are relevant to the defined sphere of communication. Matters of an active development of web-diaries on various topics influenced the changes in constitutional features of communication and brought out the necessity of the study of Internet genre of the blog as a phenomenon of the modern informational society are analyzed. The peculiarity of the genre of religious Internet-blog as a means of revealing in it the peculiarities of realization of language personality of the author – a clergy man is described.

Global informational space of the 21st century, which is one of the main parameters of the modern civilization, forms personal characteristics of a modern personality. Media space defines the mechanisms of interrelation between individuals and society, revealing new forms and means of interaction even in such a conventional sphere of life like religion. Informational field of religious mass media made up by the net of mass media is in close relation to temporal journalism and standardness which have been greatly changed for the last 15 years.

The elements of the common speech had been introduced to the journalism which have been developing in the field of the literary language and bookish style, but these processes also touched religious journalism: postsoviet reality forms issues of a new type, made on the basis of style-forming conceptions, which were not used in the soviet mass media. The latter is characterized by the reduction of the style of mass press, the lack of literary normal purity, the deviation from the norm, expedient adaptability of the norm to social situational conditions of the society [2, 5].

One of the characteristics of the media discourse of the beginning of the 21st century is to follow the tendencies marked by the researchers, moreover some changes acquired hypertropical forms such as aggressive and shocking style, striving for sensation, irony, sarcasm, deviation from the ethic norms, usage of nonliterary words, etc. The balance between the standard and the expression is shifting to the intensification of the latter and is being changed by hyperexpression.

The description of the religious language personality is based on the world outlook of the personality itself that is the theocentric paradigm

defines a man and his language as God's creations according to the Bible and sacred studies of religious men.

Religious anthropology studying the problems of language and religion, language and culture, language and consciousness, language and communication serves as a methodological basis for modern humanitarian studies.

Religious journalism is also oriented to the conceptions of speech behavior such as spoken styles and tactics, character of the relation to the interlocutor and even the aim at the language game. Spoken strategies are considered to be deliberate satiety of publicistic style by the features of spoken speech in order to economically use language means, attract more users – parishioners and people who are interested in religious matters, for expanding the circle of blog readers.

Publicistic religious discourse is a half-institutional variety of the church discourse in which the structure and the uniformity of norms of interaction, conventionally fixed in mental spheres of a definite society is revealed [4, 113]. It is not strictly regulated by status and role relations between the participants of the communication and allows deviations from regulations, ritualization and stereotypization of communication which lead to some extent to the washing away the borders of institutionality.

The communicative aim of the texts of the genre «discussions with a clergyman» is multifaceted: revealing the dictum content, the author simultaneously strives for emotional and psychological influence on the addressee by means of interpretation of Holy Scripture and citation of the precedent events and names of the canonical books, striving for imposing religious and moral education of the audience, propagating the positive part of the Church in life of a modern society, appealing to follow Christian Commandments, preserving religious traditions: the author aims at educating the audience in a religious spirit. Thus, the combination of educational and didactic, religious and educational, religious and propaganda, regulative, psychologically influential, emotionally influential aims realizes multifaceted communicative direction of the texts of Internet writing to a clergyman.

Complex communicative aim forms multifaceted image of a clergyman where, on the one hand, he is a spiritual pastor, a preceptor of laymen, but, on the other hand, he is one of the «Mother – Church's children». This variation of the image of the author reveals in the variation of language form, defining the narrator (my authorship/ our authorship / our ixclusive).

The tactic is regarded as a means of realization of the speech strategy with the help of actualization by phased solution of the communicative aims. The

strategies are chosen on the basis of the final communicative aim, peculiarities of a communicative situation, and individual peculiarities of a language personality of the producer of the discourse. The tactics which realized the strategies are the tools of successive achievement of the aim by means of solving definite problems of communication [4].

Religious Internet discourse is a multimeasured linguistic, social and cultural phenomenon, an inalienable category of which is evaluation that is social evaluation which is one of the most important spheres of semantics of the language of a newspaper, a circle of the actions of inner factors of its development [3:39]. Evaluation is one of the publicistic universals reveals in selection and classification of the facts, in their description at the definite sight level, in accordance with negative and positive details, in specific linguistic means.

Religious discourse in modern society appears as a mechanism of defining value guidelines and priorities of nowadays life in accordance with the highest personal values. Religious values serve axiological guidelines both for an individual and society. The highest guidelines of person's behavior are coloured by being refracted through the prism of the axiological world view of the society and ethnosociety.

Topical scientific interest to the phenomenon of the blogs, which have been spread for the last decade, vividly demonstrates the tendencies to the genre convergence and shift of the borders between private and public.

Mass media are characterized as a reference to mass audience, all-availability, corporation character of production and spreading information. One can name along with the modern mass media both Orthodox and Islamic Internet web-sites, blogs and columns. Modern religious discourse which is one of the oldest types of institutional communication hasn't been studied yet.

The main speech strategies of the church journalists in e-journals and blogs are dialogues and «contact built in». Dialoguization is revealed through striving of laymen for hearing and the opinion and advice of a preceptor on a fact, an event or a phenomenon, or vice a versa when a clergyman finds out about life of his laymen about the solution of problems stated.

So called «built in contact» effects are rapprochement, resemblance, unity. Such manipulations demonstrate the fact that a clergyman is a common person like everybody else around, he possesses emotional revelations, he is interested in all events of temporal life. A clergyman comes in contact with one reader and at the same time contacts with all the audience on the web-site.

The signals of speech have a contact achieving, approaching potential. The method of «built in contact» includes the idea of coordination such

as «I want to be like you». To achieve such a contact not only large language experience but the skill of evaluation of such experience from the other side help the author. Due to both speech flexibility in everyday life and «built in contact» and its extremely manipulative character he gets used to «a foreign language», imitates it and makes it his own.

In religious journalism along with the traditional journalism basic tonality of unconstraint and good wishing to the reader makes harder. The ton in accordance with the subject of speech in journalism is situationally conditioned, depends on an object and defined by emotional and will and evaluative settings of the author towards the situation and the topic of the discussion. Many researchers mark the increasing aggressiveness of modern speech, along with the often use of confrontational strategies and tactics of speech behavior [1, 26].

A speech tactic of irony as a lesser emotional type of aggression in religious blogs is an effective means of evaluation and addressee unmasking. The tactic of irritation shortens status and role distance between a clergyman and a layman. On the one hand, it transforms the discussion into a «speech» register, on the other hand, it realizes preceptor's strategies such as a tactic of evaluation and disapproval. The tactic of ascertaining of incompetence is pragmatically aimed at the evaluation of statements and image of thoughts of an addressee as bad-grounded, non professional, not compatible with spiritual senses.

Thus, the main specific feature of the blog on a church web-site is revealed in its vividly shown axiological dominant, through the prism of which individual, personal and institutional bases are differentiated and interrelated. They are revealed both as a complex interrelation of individual and professional sides of the language personality of the author – a clergyman and in its specific speech and genre characteristics.

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The work was submitted to International Scientific Conference «The cultural heritage of Russia and the contemporary world», the United Kingdom (London), 20-27, October 2012, came to the editorial office on 18.10.2012.

Materials of Conferences

**MATHEMATICAL MODELLING
OF THE TASKS OF HYDRODYNAMICS
BY THE METHOD OF FICTITIOUS AREAS**

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In this work given a justification of the method of fictitious domains. For the first time obtained not improving mark of convergence rate of the solving the from auxiliary problem to solving the original problem at the time when the small parameter strive to zero.

The fictitious domain method is one of the known methods of approximate solutions of boundary value problems in mathematical physics. In general fictitious domain method is justified for the linear boundary value problems of mathematical physics. In this work is devoted to substantiation of the fictitious domain method for nonlinear elliptic equations. A new method of obtaining best possible rate of convergence of solutions in the method of fictitious domains.

Let's consider the boundary value problem for nonlinear elliptic equations in $\Omega \subset R^3$ area with border area S

$$(v_x^\varepsilon, \Phi_x)_{L_2(D)} + ((v^\varepsilon)^3, \Phi)_{L_2(D)} + \frac{1}{\varepsilon} (v^\varepsilon, \Phi)_{L_2(D_1)} = -(f, \Phi)_{L_2(D)} \quad (5)$$

for all $\Phi \in W_2^1(D)$.

Theorem 1. Let's $f \in W_2^{-1}(D)$. Then there exists a unique weak solution (3)-(4) and it is satisfied the estimate

$$\|v_x^\varepsilon\|_{L_2(D_1)}^2 + \|v^\varepsilon\|_{L_4(D)}^4 + \frac{1}{\varepsilon} \|v^\varepsilon\|_{L_2(D_1)}^2 \leq C \|f\|_{W_2^{-1}(D)}^2, \quad (6)$$

where $\|f^\varepsilon\|_{W_2^{-1}(D)} = \sup_{\|\Psi\|_0=1} (f, \Psi)_{L_2(D)}$, at that,

when $\varepsilon \rightarrow 0$ this solution converges to the generalized solution of the problem (1), (2).

Definition 2. Stronger solution of the problem (3)-(4) is called function $v^\varepsilon \in W_2^1(D) \cap W_2^2(D)$, that satisfying to equation (3) almost everywhere.

Theorem 2.1.2. Let's $f \in L_2(\Omega)$, $S, S_1 \in C^2$. Then there a stronger solution of the problem (3)-(4) and it is satisfied the estimate

$$\|v^\varepsilon\|_{W_2^2(D) \cap W_2^1(D)} \leq C_\varepsilon \quad (7)$$

where $C_\varepsilon \rightarrow \infty$ at $\varepsilon \rightarrow 0$.

Theorem 2. Let's $f \in L_2(D)$, $S, S \in C^2$. Then

$$\Delta v - v^3 = f, \quad (1)$$

$$v|_S = 0. \quad (2)$$

As method of fictitious domains for the continuation of the lower coefficient in the auxiliary area $D \supset \Omega$ with border $S_1, S_1 \cap S = \emptyset$, solving equation with small parameter

$$\Delta v^\varepsilon - (v^\varepsilon)^3 - \frac{\xi(x)}{\varepsilon} v^\varepsilon = f; \quad (3)$$

$$v^\varepsilon|_{S_1} = 0. \quad (4)$$

where f – continued with zero out of Ω and

$$\xi(x) = \begin{cases} 0, & x \in \Omega, \\ 1, & D_1 = D/\Omega. \end{cases}$$

Next one notations used are from the monograph.

Definition 2.1.1. Generalized solution of the exercises (3), (4) is the function $v^\varepsilon \in W_2^1(D)$, that is satisfying the integral identity

$$\|v^\varepsilon - v\|_{L_2(\Omega)} \leq C_0 \sqrt{\varepsilon}, \quad (8)$$

where C_0 – positive constant that not depend from ε .

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The work was submitted to International Scientific Conference «The introduction of new educational technologies and principles of the organization of the educational process», Indonesia (Bali), 12-19, December, 2012, came to the editorial office on 30.10.2012.

*Materials of Conferences***THE INFLUENCE OF CONSPIRACY CONCEPTS ON GLOBAL POLITICAL PROCESSES FORMATION**

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Nowadays the idea of political processes in different countries is mostly formed under the impact of several influential conspiracy concepts, which are spread by means of mass information. Due to different publications at press, book production, feature films and serials works of conspiracy theorists have managed to release, acquire mass readers, finally become an integral component of modern culture.

The popularity of conspiracy theory in modern world, as many researchers think, is conditioned not by the fact that conspiracy theorists manage to discover some objective regularities, which were hidden earlier, but by the fuzziness of the whole world's image in modern epoch, by the situation of instability and vagueness, including political sphere. It's an idea of political sphere of society life where the conspiracy receive wide and grateful mass support, what is conditioned by the nature of power itself, the essence of its carrying out mechanism. The fact is that even in the most democratic and transparent societies the majority of political decisions in any event are made «behind closed doors» and even ubiquitous mass media is not able to penetrate into this curtain. In spite of permanent increase of modern conspiracy theorists works' popularity, within the scope of modern scientific politological community the practice of preparation and use of conspiracy concepts is usually related to parascientific activity. It is conditioned by the fact that getting of confirmation of conspiracy practice existence is extremely complicated because of absence of reliable documentary evidences and relevant methods, which allow to clearly define the determinants of political conspiracy institutions and decisions formed by them. In actuality the most difficult thing is to find concrete evidences, which prove that one or another global, regional, local political event is really conditioned by the action of conspiracy factors. It should be noted that to the conspiracy labeling as the sphere of parascience by official political science conspiracy itself answers that scientifically-political researches, with few exceptions, are the sphere of pseudo-scientific myths' producing, which act as «cover» of complicated sphere of real politics. In terms of conspiracy theorists, political science supposedly simplifies, schematizes, idealizes real politics, showing it as the result of collision of different forces, the

goals of which are rarely reached (even in part), when the politics, after conspiracy interpretation, is «coded» only in one or few centers of influence.

In any event, the increasing popularity of conspiracy concepts, which arose in deep social and psychological needs of human being, makes conditional on actuality of their scientific study in the context of analysis of conspiracy processes' influence on modern idea of political processes. In spite of the presence of flaws in conspiracy constructions, among which in the first place should be attributed the idea of existence of secret, not institutionalized power, that carries out unified policy during the long period of time, what seems to be rather unlikely, because the absence of institutions and high degree of secrecy block information flow between such rulers and dispute their ability to carry out combined long-lasting activity by the single plan, conspiracy concepts continue to influence mass consciousness and form ideas of political processes, which may differ from their official version. This whole complex of problems is not enough developed and requires further deep theoretical development.

The objects of this research are conspiracy images and concepts in the system of modern idea of political processes.

The subjects of research are methods and sources of formation of conspiracy concepts of global political processes and political processes in the society.

The goal of research is to carry out politological study of the influence of conspiracy concepts on the formation of the political processes idea.

This goal requires the statement and solution of the following concretizing intermediate research **problems**:

- to reveal the typical features of conspiracy idea of politics;
- to analyze the meaning of conspiracy constructions at the modern stage of society's development;
- to research the peculiarities of influence of conspiracy concepts on the formation of mass idea of political process in the society.

Nowadays some influential conspiracy concepts have a great influence on formation of the images of global political processes, their original notions, which are character for the population of different modern countries. In the opinion of famous Russian specialist in the conspiracy sphere A.G.Dugin, conspiracy concepts have got spread right today not accidentally, «in the era of postmodern, with its propensity to extravagant and disproportional constructions, to absurdity, to imposition different contexts on each other, to ironic derision of the Enlightenment spirit, to rational and positivistic attitude to the history, politics, culture, art».

Belief in conspiracy, occult forces and powerful secret organizations, in «invisible hand» and «world backstage», which invisibly rules the history march and makes nations and countries obey the evil will of conspirational «secret rulers», has always existed in humanity. That's why modern conspiracy may be considered to be a continuation of eternal theme of myths about «dark forces», about «evil's intrigues», about «crafty designs of Satan and his servants», what was and is the most important and necessary part of every World religion. In contrast to this idea, modern conspiracy is interesting, because traditional «demonological» and «eschatological» motives are placed out of determined religious context, are attached to purely modern and postreligious phenomena, and it doesn't use any clear and strictly defined method. Hence there are such character features of modern conspiracy concepts as chaos and nonsense of their formation, putting forward a variety of hypotheses, improbable guesses and absurd suspicions, what make conspiracy the character sign of postmodern style. Like the postmodern paradigm, which often combines incompatible things, there are no rules and laws in the modern conspiracy concepts: even the most improbable hypothesis, «for example, that America is ruled by aliens, who conspired the secret departments of CIA and the head of Federal reserve system – may be the tendency of the most careful researches, which unite the crowds of passionate conspiracy theorists, who spend their money, time, powers and nerves searching for the facts and arguments that confirm it»¹.

Conspiracy concepts, from the viewpoint of other Russian researcher of conspiracy theory I.A. Yablokov, came instead of religious consciousness, had gradually developed separate paradigm of thinking in the society, where the processes of modernization and secularization proceeded. At the same time the conspiracy theory became qualitatively new phenomenon in the history of western society's development: by integration of some elements of human psychology into its structure, by using of the image of superficial science and critical approach to the reality, they managed to explain to the people what is going on in the modern community using clear terms and images. General grow of scholarship and development of informative technologies by the end of XX century led to the fact that borders between the intellectual elite, which generates the conspiracy theory, and the masses, who consume it, became more blurred. Nowadays the situation is that everyone who wishes, if he owns sufficient amount of resources, can make his own history idea. An important role here is played by mass media, which allowed to «reposition the conspiracy theories from subculture to the mainstream of popular culture»².

¹ Dugin A.G. Conspiracy. M., 2005. P. 3-4.

² Yablokov I.A. The conspiracy theory and modern historical consciousness (by example of American historical thought). Author's abstract of dissertation for the doctor degree of candidate of historical sciences. Tomsk, 2010. P. 13-14.

In 1960-1980, the conspiracy was a destiny of «marginal odd people and yellow «tabloids», and in 1990 it became the phenomenon of mass culture. An original break became, according to A.G. Dugin, from the famous serial «X-files». In this serial, its main characters, the agents of special secret services Mulder and Scully, investigated every type of possible «conspiracies» and «invasions».

Due to this and other films and serials the conspiracy concepts manage to release, what allow them to become an integral component of modern mass culture. Conspiracy, according to A.G. Dugin, gradually becomes the legitimate style, some kind of fashion, and there are some reasons to assert that the interest in conspiracy concepts is not a short-term hobby, but a stable sociological tendency»³.

From the viewpoint of the editor-in-chief of conspiracy Internet-portal «Conspirology.org» S. Pochuev, the unprecedented in the history of western civilization passion about secret doctrine had received the stimulus after D. Brown's novels «The Da Vinci Code» and «Angels and Demons» publication, which were immediately released in Hollywood. This novels, which can hardly be called the highly artistic literature, are in fact conspiracy researches that are in simple detective form for public. As the result, D. Brown, who had made a talented compilation by its essence and who had made a lot of mistakes, which were immediately noticed by specialists and professional historians, nevertheless brought to the big audience of readers the whole stratum of conspiracy themes and directions, which became so claimed by the curious public that soon all largest publishing houses of the world began to publish and re-publish not only serious but also really insolvent researches, devoted to the questions stated by D. Brown. As I.A. Yablokov mentions, D. Brown manage to draw an attention of a big audience of readers because of used in his works conspiracy stylistics⁴, descriptions of different heretical movements (catarrhs), secret societies (for example, vanished in 1308 Templars, who revived then in many conspiracy texts); D. Brown's texts represent, according to this author, something like guide that make «inquisitive minds» with «low degree of consciousness mythologization» search for the new interesting things, impulse to history study, even at amateur level⁵.

In any event, the conspiracy matter, touched upon in D. Brown's novels, happened to be the good way for attraction of wide interest of readers from different countries. After his most famous works' publication there dramatically increased the interest to artistic prose, political journalism and

³ Dugin A.G. Conspiracy. M., 2005. P. 4.

⁴ In the novels of D. Brown there appear rather popular secret organizations: Illuminati, Assassins, Templar, Opus Dei etc. Meanwhile, as it's in the classical detective all active personages are separated to the two camps – positive characters and negative ones.

⁵ The secret of the Illuminati: Dan Brown interview [Electronic resource]. Access mode: http://www.portal.oneway4you.com/news/new_81.html.

scientific works, belonging to the pen not only of moderns, but of seemed to be forgiven conspiracy theorists-authors. There began practically «conspiracy» agiotage, caused by «Dan Brown's effect», which exceed by its scale the literature phenomenon of its famous predecessor U. Eco, who wrote «The Name Of The Rose», «Foucault's Pendulum», «The Island of the Day Before», «Baudolino». Conspiracy matter very quickly became an enormous business-trend, which brought about hundreds millions dollars profit. As S. Pachuev notes, even if such phenomenon as «danbrownizm» is not taken into consideration, nowadays practically every second blockbuster, book or film, in any event is involved with conspiracy⁶.

Such popularity of conspiracy theory, from the viewpoint of A.G. Dugin, is not conditioned by the fact that conspiracy theorists manage to find some objective conformities that were hidden earlier: the point is that the whole world image, formed at the modern epoch, with character conviction of world's objectiveness and rationalistic educational program turned out to be fuzzy. Developers of conspiracy concepts «override reality»⁷, form the idea of surrounding reality, people's images of different aspects of social life. Within the scopes of conspiracy concepts there are also formed defined images, ideas of political processes, which are, due to mass media, implanted to mass consciousness. Just when it concerns politics conspiracy achieve wide and grateful support. It is conditioned by the nature of power itself: even in the most democratic and transparent societies the majority of political decisions in any event are made «behind closed doors» and even ubiquitous mass media is not able to penetrate into this curtain. Finally, existing in the political sphere «rather real and pragmatically explainable zone of shadow incredibly increases within the active observers» and myths about different «conspiracies» are born⁸.

What concerns global political processes, the biggest influence on forming of their images at mass consciousness had such influential conspiracy concepts as Masonic conspiracy, Jewish conspiracy, mondialist conspiracy, and also conspiracy of bankers or economical conspiracy. It's necessary to mention, that in image of some conspiracy theorists all this concepts turn out to be merged, and their influence on political process is presented at the same way, that quite often forms rather discrepant ideas of political events of present and past within public at large.

With the concept of masonic conspiracy there is associated the concept of «Judaic conspiracy», or «**Jewish conspiracy**», which are often merged in the term of «Masonic-Judaic conspiracy». Histori-

cal antijudaism, exactly as Christianity, V.G. Nemirovsky notes, were usually Christian: unacceptance of Jesus Christ by Judaism meant fundamental contradiction of two religious perspectives⁹. Appearance of conspiracy antijudaism coincided with the beginning of decomposition of theocratic Christian civilization of the West. Some Christian thinkers and church figures, seeing the decline of their religion, attributed it to intrigues of their sphere enemies, among which not only «mythologically» but also theologically are Jews, who profess the law in that way if the Gospel does not exist (as it is known numerous places in Talmud are notable for uncompromising and theologically based hate towards Jesus Christ and the Christian church). As the result it is degradation of the church and its loss of central positions that led, according to A.G. Dugin, to the appearance of Judaic conspiracy theory. The paradigm of «Judaic conspiracy» itself, in V.G. Nemirovsky's opinion, is the most archetypal conspiracy model: this idea corresponds to deep unconscious archetypes, that allow it to beat the Masonic model by its popularity.

It's necessary to mention that paradigm of «Jewish conspiracy» is «the most archetypal conspiracy concept» that became widespread in XX century, when the Masonic conspiracy had been pushed to the sidelines in the mass consciousness. This circumstance is not accidental, because everything that took part during the last century about Jewish people: persecutions in Germany, creation of State of Israel, wars in the Middle east – all this stuff fed the theorists of «Jewish conspiracy» during the century and also made «Jewish factor» the most important ethnopolitical concept of XX century.

As it was stated above, the most influential modern conspiracy concepts are closely connected with each other: this correlation is retraced in works of conspiracy theorists and in mass consciousness. Thus, for example, Masonic and Judaic conspiracy concepts are connected with **the theory of economical conspiracy** or the conspiracy of the bankers, which is based on the idea that bankers and world finances' holders are the most influential «conspirators» who rule the political processes. It was easy to make Judaic conspiracy conditional on economical conspiracy because there a lot of Jewish nation representatives among the greatest world bankers.

It's necessary to mention that the USA are traditionally rather suitable «target» for conspiracy theorists of any kind. «Conspiracy, as I.A. Yablokov think, runs through the whole United States history»¹⁰. It's known that first colonists, who came to the New World, considered these acres to be the future City on a Hill, and that's why they saw enemies' intrigues everywhere. Claims of Americans

⁶ Conspiracy to the mass //Interview with editor-in-chief of conspiracy Internet-portal «Conspirology.org» S. Pochuev [Electronic resource]. Access mode: www.evrazia.org/day.php?id=20090622.

⁷ The same.

⁸ The same P. 5.

⁹ Nemirovsky V.G. Secret societies and conspirators. St.Petersburg, 2007. P. 17.

¹⁰ Entin J. Conspiracy theory and conspiracy mentality // New and modern history. 2000. N 1. [Electronic resource] / J. Entin. – Access mode: <http://orel.rsl.ru/nettext/foreign/entin/entin.html>.

exceptionality have long history. For example, O.A. Platonov who was repeatedly quoted here claims USA «vanguard and epicenter of Judaic-Masonic civilization formation». Thus, the first project of USA creation as the State was developed in 1748 by the founder and head of American Freemasonry B. Franklin. The Declaration of Independence, which initiated the creation of the USA, was signed by many masons, «the brainchild of Judaic-Masonic ideology was the Constitution of USA». Masonic symbolism is presented at many state documents of the USA, and first of all at money¹¹.

There are a lot of scientific works where the analysis of modern globalization and global political processes problems is made in the context of conspiracy concepts and particularly «mondialist's conspiracy». Thus, the detailed analysis of globalization processes was carried out by professor, dean of sociological faculty of MSU V.I. Dobrenkov. Modern globalization, in V.I. Dobrenkov opinion, is the globalization in American, which is fraught with the fact that it «constitutes many threats which are truly death-defying to the humanity. World's community hasn't quite realized the depth and scale of such threats, that lead humanity to death, though in the depth of national self-consciousness of different nations there is maturing clear understanding of those dangers, which threaten universal liberal globalization»¹². Among the threats that are constituted by liberal globalization or globalization in American, V.I. Dobrenkov has singled out such threats as erosion of national statehood, undermining of independent national states' sovereignty, destruction of religious traditions and national culture, traditional values of national life. Liberal globalization, from the scientist's viewpoint, deprives world states of their national-state and cultural identity, transforming the planet into some homogeneous space, which is characterized by the supremacy of one super-state. The USA claim to be such state nowadays, in case of realization of this global project the USA will be able become the center of world dictatorship and will rule all the world's nationalities with the help of world government, police and armed forces, that means the establishment at the level of the world space¹³.

To sum all these and other conspiracy concepts not mentioned in this research, the general idea that permeates through the numerous scientific researches of domestic and foreign conspiracy theorists is the conditionality of modern global political processes by the activity of branched system of secret organizations, which has national character and aims to build the world by the single design. In the vision of global political processes from the viewpoint of conspiracy concepts nowadays there

can be found two prevalent interpretations. According to the first one, modern global political process is defined by the USA: along with formal leaders of this country, there exist different secret and semi-secret organizations, which have considerable influence not only on American leadership, but also on world political processes.

Thereby, the considerable part of modern conspiracy theorists regards the USA as the country that influence global political processes, and different secret organizations inside the USA are considered to be the centers, where the world's politics is made, strategy decisions, on which the future of world community depends, are reached. At the same time there is another interpretation, according to which the global politics is defined by different secret and semi-secret organizations that are deconcentrated around the world and are not necessarily connected to the US. Thus, from the viewpoint of vice-president of geopolitical sciences of Russia, colonel general L.G. Ivashov, the situation in the world nowadays develops in the following way: «on the one hand, there is the USA country that is at the top of the world empire, in which it tries to drive all other countries and nations, and on the other hand, similar claims are asserted by the world financial capital, which is based on the branched system of Zionist centers and bought elite of some countries». Financial capital, in L.G. Ivashov opinion, tend to state its world's order and to control the planet by means of financial flows.

As we see, conspiracy interpretation of political process is generally based on the acceptance of secret organizations as the dominant role. The existence of secret organizations isn't denied in general by researches that do not belong to the conspiracy camp: the existence of such secret of semi-secret organizations as Trilateral Commission, The council of international relations or Bilderberg Club, nowadays is confirmed of record. The fact is that anti-conspiracy theorists, in contrast to apologists of conspiracy theory, do not think that these secret societies are able to carry out the control of national governments of the leading countries and manipulate global political processes. Their opponents on the contrary have no doubts that members of these societies not only carry out the most careful control of many big world corporations and banks, but also secure the rotation of the main high-ranking governmental persons, who in their turn carry out just the policy which is planned and promoted by these secret organizations. Having a great influence on national elections and national politics of different countries, and also on the global politics, these societies turn out to be surprisingly unacceptable for some kind of researches not only for governmental bodies but also for mass media. At the same time conspiracy theorists are still convinced of the fact that the final aim of these latent societies is the creation of «single world government with the permanent centralized social control and the loss of

¹¹ Platonov O.A. The secret of illegality: Judaism and freemasonry against Christian civilization. M., 2005. P. 444-450.

¹² Dobrenkov V.I. Globalization in Russia. Sociological analysis. M., 2006. P. 291.

¹³ The same. P. 291-292.

national sovereignty by all countries»: considered aim nowadays becomes more real due to increasing corporative and finance control of certain countries' governments and economics¹⁴.

Global management of political processes is accordingly carried out by the global world elite, which is not structured, amorphous, not institutionally formalized formation. The members of this world elite are mainly representatives of North America and West Europe, including politicians, certain state officials, ambassador extraordinaries and plenipotentiaries of leading countries, big businessmen and bankers (generally presidents and highest managers of leading transnational corporations and banks), editors-in-chief of leading mass media services, scientific, firstly university elite, heads of certain scientific development and production centers and funds (first of all from USA and West Europe) and even individual priests. Meanwhile inside the global world elite there is certain level gradation – according to aims and goals; ideological, administrative, scientific etc. Thus V.B. Pavlenko singles out upper stratum within the scope of world elite, which is called «value» elite, presenting some intertwining of tribal aristocracy and owners and top-managers of leading transnational corporations. The task of these people is to preserve the traditional continuity and to define the general strategy of global development. The biggest part of world elite is the «functional» elite, which includes the leadership of different scientific development and production centers and structures connected with strategy planning, which are interact with the governments of «group G7» countries, and also representatives of western scientific elite. The main aim of global (world) elite is advance against «New world order», while the global development of state policy and project tasks by its spreading is supported by secret organizations and secret institutions¹⁵.

Conspiracy paradigm therefore is directed to the formation of some ideas, images of political process, which are based on consideration of everything that happens in politics as programmed actions carried out according to plans of the members of latent World government, which approaches to state its World supremacy. Conspiracy theorists try to implant in the mass consciousness the image that occurring in the modern world political processes, everything connected to the globalization, new world order, World government, is conditioned by the action of secret communities, organizationa and groups, «which bear the imprint of the old orders of Freemasonry, round tables and the sinister Order of the Illuminati». Apologists of the conspiracy theory try to «find» the origins of modern latent societies in the secret organizations of antiquity, which «set

their conspiratorial traps throughout the history of mankind»¹⁶. It's necessary to mention that the comparison of traditional, scientific and conspiracy concepts and their interpretations often leads to exactly the opposite conclusions. The most striking examples are the reconstruction of such big events of the XX century as First and Second world wars, socialist revolutions, «cold war», terrorist attacks of the USA in the 11 of September 2001 etc.

According to conspiracy theorists, political situation in the world particularly in the most influential countries is formed in the following way: different secret organizations (Masonic, Judaic etc), and also individual influential persons pay big money to politicians and state officials, turning them into a obedient instrument of their will. It can be carried out not only in a form of direct bribe, but also in other forms, such as contributions, sometimes really big, about millions of dollars, to the election campaigns, disproportionate fees for speeches and books, free travels to different countries of the world.

Secret societies, which in aggregate form so-called world certain, carry out their criminal activity, trying to decide the fates of all mankind, to influence the global political processes and to assume the world resources, not even being elected by someone and authorized to carry out such type of activity. From the viewpoint of conspiracy theorists, the activity of the representatives of secret societies should be considered to be criminal collusion against the humanity: creating the secret, illegal controls, world curtain and its leaders supposedly oppose themselves to nations and countries, substituting the national power for transnational conspiracy (Judaic, Masonic, economical etc.). At the same time some conspiracy theorists, including O.A. Platonov, do not think that world curtain is some monolithic formation that is directed by one center. On the contrary it consists of a number of groups, which compete with each other for the power over mankind. In opinion of this author, even among Masonic organizations there is continuous confrontation of different orders and rituals. All the more there are some bitter divisions between different, competing bank and financial groups, transnational corporations. From the viewpoint of conspiracy theorists, just the struggle between different secret societies explains the fact that real World government hasn't been created up to present, in spite of some mighty powers' aspiration for the world supremacy.

As it was stated above, among the representatives of secret societies there are disagreements in number of big political share, which include particularly Americans' and their allies' invasion of Iraq. It's necessary to mention that just events that preceded the war in Iraq, terror attacks in the USA in the 11 of September 2001, perhaps caused the biggest quantity of various conspiracy versions and

¹⁴ Senchenko N.I. Who makes the world politics? M., 2010. P. 197.

¹⁵ Senchenko N.I. Who makes the world politics? M., 2010. P. 197.

¹⁶The same. P. 198.

interpretations. On the subject of these events there are written a lot of books, shot a lot of films, made a big number of publications of every kind, which are placed, particularly in the Internet.

As I.A. Yablokov mentions, «embedded in the consciousness of Western man archetype of Jew carrying negative information, is not able today to be destroyed by any false constructions, sometimes fantastic designs, broadcasted by media»¹⁷. In other words, he who wants will be always able to find considerable reason to express his anti-Semitic views. In this context it's appropriate to mention the statement of M. Leroy, the author of research, devoted to the activity of Jesuit order in France: «An image in myth, whether it is borrowed from the historical tradition or drawn from traditional rhetoric, is undergoing significant changes. The richness and brightness of the image obscure the real object including the metaphor: an imaginary plan begins to mean more than a plan of life, something that comparable, supersedes that is compared... The banal image, the more urgent it refer to the usual range of associations, to literary conventions, religious or mythological tradition or just to daily impressions ... The image is not a decoration of speech, but the main instrument of persuasion. Appealing to the imagination, you can achieve greater success than if only refer to the mind»¹⁸. Emotional influence of September the 11th events cause the number of different conspiracy hypotheses, which was revealed by western mass media with great pleasure, trying to make them spectacular and bright image¹⁹. The mass media, while broadcasting such conspiracy versions, promotes the inculcation in people's of different countries of the world consciousness the idea of the fact that political processes, the most important events of political history are not just simple coincidence, caused not by the objective factors of social development, but single out as preplanned actions, carried out by «world's curtain», different secret societies, which aspire to world supremacy.

Resume on the chapter

1. The number of influential conspiracy concepts has a great influence on formation of images of global political processes, original ideas, which are character for the population of different modern states. Within modern society the number of conspiracy theories became quite a new phenomenon: by integration into its structure some elements of human's psychology, using the image of outward scientific nature and critical approach to the surrounding reality, they manage to explain people the changes happening in the world community with the use of understandable terms and images. An important role was played by mass media, due to which the conspiracy has become the phenomenon

of mass culture. Conspiracy concepts nowadays are reflected not only in different films and serials but also in book printing production, newspaper, magazine and Internet-publications: the interest in such literature is rather high, what does not depend on truthfulness, documental exactness and correctness of all these sources. As the result conspiracy becomes rather legitimate style, and the mass interest in conspiracy concepts is considered to be a stable sociological tendency. Within these concepts there are formed some ideas, images of political processes that, due to the mass media, are implanted in the mass consciousness: conspiracy has a great and grateful support in everything that concerns politics. Concerned process is conditioned by the nature of modern political power, the essence of its carrying out mechanism, as even in the most democratic and transparent societies the majority of political decisions are reached behind the closed doors and even ubiquitous mass media mostly is not able to penetrate into this curtain. All this promotes the appearance of myths about different conspiracies.

2. Nowadays the biggest influence on formation of the images of global political processes still have such influential conspiracy concepts as Masonic conspiracy, Jewish conspiracy, Mondialist conspiracy, and also the conspiracy of bankers or the economical conspiracy. It's necessary to mention, that in the image of some conspiracy theorists all these concepts turn out to be merged, and their influence on the political process is presented in the same way, what often forms rather conflicting ideas of political events of past and present within general public. The defined general idea, which is situated in the middle of numerous scientific researches of domestic and foreign conspiracy theorists, is the conditionality of modern global political processes by the activity of branched structure of secret organizations that has supranational nature and aims the building of the world by the single design. According to conspiracy concepts, there are two prevalent interpretations of the global political processes idea. In accordance to the first one, the modern global political process is defined by the United States; along with formal leadership of this country there are different secret and semi-secret organizations in it, which can considerably influence not only on American leadership, but also on world political processes. At the same time, there is another interpretation, according to which the global politics is defined by different secret and semi-secret organizations that are deconcentrated all over the world and are not surely connected with the United States. The final aim of these latent organizations is the creation of the single world government with permanent centralized social control and loss of the national sovereignty by all countries, what nowadays becomes quite possible because of increasing corporative and financial control of governments and economics of individual countries.

¹⁷ Yablokov I.A. Conspiracy myths of anti-Semitic character and their presence in modern western media space // Tirosh – works on judaica. Issue 9. M., 2009. P. 180-181.

¹⁸ Leroy M. Myth of Jesuits: from Beranger to Michelet. M., 2001. P. 292.

¹⁹ Yablokov I.A. Conspiracy myths ... P. 181.

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The work was submitted to International Scientific Conference «Modern sociology and education», the United Kingdom (London), 20-27, October, 2012, came to the editorial office on 30.08.2012.