

SUMMARIES OF THE ARTICLES IN ENGLISH

PHILOLOGY

P. 7. *Dashevskaya Olga A.* Tomsk State University. **MOTIF OF FALLEN LEAVES IN VADIM ANDREEV'S POETRY AND THE NATIONAL TRADITION.** The poetry by Vadim Andreev (1902–1976), an early emigrant of the leading wave, which is still out of researchers' attention, is considered in the article. It is significant both from the point of view of studying individual poet's strategies and as a reflection of relevant motifs of Russian poetry, which makes significant allowances in understanding the problems of integral development of Russian literature of the 20th century. The interpretation of the fallen leaves motif in V. Andreev's poetry is presented in the article in two aspects: first, its genetic and typological ties with the Russian poetry of the 19th – early 20th centuries are revealed, second, it is analysed in the functional and semantic aspects. Andreev is closest to the layer of Lermontov's ideas ("Leaf", 1841) in the 19th century poetry. In Andreev's poetry the motif of a leaf driven by wind marks the general emigrant theme of expatriation, homelessness and loneliness; "torn away leaf", on the one hand, is a metaphor of human life; and, on the other hand, it embodies the idea of disconnection with historical roots. In the Silver Age the motif of fallen leaves in V. Andreev's poetry is deeply concordant with the understanding of the fall as the end of a life cycle in S. Yesenin's poetry. Andreev develops the subject of departure as it is in Yesenin's expression, he is in close agreement with Yesenin in the key intent: falling leaves symbolize implacable rules of life. It is claimed that the fallen leaves motif meanings aspects, which were developed in the Russian poetry of the 19th – early 20th centuries, retain in Andreev's lyrical frame. At the same time there is a significant broadening of its semantics. The following meanings are pointed out and analysed in the article: 1) it forms existential range of problems, 2) the philosophy of life is expressed with its help, 3) the motif of fallen leaves has the world modelling role, 4) a falling leaf performs the function of connection with metaphysical reality (a series of "A Stroll with B.L. Poplavskiy"). Finally, the idea of culture semiosis (the poem "Look: the burden dies out but nevertheless it accumulates") is expressed in Andreev's poetry through the motif of fallen leaves. The motif of fallen leaves gains a universal sense in Andreev's lyrical frame, its semantics covers almost all spheres of existence and human life: natural – existential – mental (from the perspective of consciousness, thought) – cultural. The philosophical context is introduced – the book *Fallen Leaves* (1914) by V. Rozanov. Andreev involuntarily becomes consonant with Rozanov in the idea of a "tree", which is developed by the Russian philosopher: a tree both as "growth", development, and as roots, as the ground and basis of subsistence of an individual and national culture. The motif of fallen leaves in Andreev's poetry remains the prevailing one from the end of 1920s till 1970s. V. Andreev's poetry fairly carries on the traditions of Russian literature and appears to be the most "Russian" branch among early emigrants of the leading wave. The motif of fallen leaves becomes a means of revelation of poet's national identity. Its analysis enables to reveal the deep background of Russian literature, its psychological and mental components, which the motherland poets and the representatives of Russian emigration in the 20th century preserved.

Key words: motive; emigration poetry; traditions of Russian poetry.

P. 13. *Yevtushenko Tatiana G.* Tomsk Polytechnic University. **LINEAR AND TWO-DIMENSIONAL SUPRAGRAPHIC UNITS IN RUSSIAN SCIENTIFIC PROSE.** The paper presents the current study of typographic resources as an essential part of punctuation of Russian scientific texts, whose wide usage and linguistic relevance in written communication cannot be neglected. The status of linear and two-dimensional supragraphic units such as variation in printing, type-size, capitalization and spacing in modern printed texts is discussed. It is assumed that supragraphics, consistent with ordinary punctuation marks, produce a certain effect on a scientific reader making the process of text interpretation easier, and its functioning differs from the punctuation of other styles. Different aspects of typographic resources usage can be discovered determining the set of functions of supragraphics in scientific texts, considering the list of requirements and real punctuation practice both in printed and pre-printed versions. Linear and two-dimensional supragraphics are used in modern scientific prose in accordance with their conventional semantics and perform separating and emphasizing functions. Capitalization and spacing are used to separate units and sections of a scientific text. Setting off headings, subheadings, and document entries using variation of fonts, size-type and two-dimensional changes reveals hierarchy of text structure, which is obligatory at a certain edition. The essential parts and units in the continuous text of a scientific narrative are emphasized using italics, bold, underlining and type-size. All typographic punctuation means can be used singly or in combination. Focusing on words and word groups essential to the text contents is optional but consistent within a certain scientific journal edition. A wide range of functions of supragraphic resources in modern scientific texts is specified by a great variety of standards offered by different publishing houses. Study of supragraphic conventions in operation in pre-printed scientific texts reveals a consistent system for signalling emphasis; however, some linear supragraphic resources such as capitalization, italics and underlining can also be used for giving additional emphasis to the words that seem important to the author but not essential enough to the scientific text structure itself. Two-dimensional supragraphics conform to general typographic standards, and the combination of units is used sparingly. Studying supragraphics as a part of punctuation allows completing a complex multi-level structure of punctuation phenomenon, estimate its linguistic value in scientific written communication, which can contribute to further development of common standards for the use of supragraphics.

Key words: punctuation; printed and pre-printed scientific texts; linear and two-dimensional supragraphics.

P. 17. *Katunin Dmitry A.* Tomsk State University. **BURYAT LANGUAGE STATUS IN MODERN RUSSIAN LAW.** The Buryats are one of the aboriginal peoples of the Russian Federation amounting to 445 175 people (2002), who mainly inhabit the territory of the Buryat Republic (272 910), Irkutsk (80 565) and Zabaikalsky (70 457) Regions. In the article the legal position of the Buryat language is considered as stated in special and fundamental regional laws that regulate the use of the language in the Buryat national-administrative formations on the territory of Russia: the Republic of Buryatia, Ust-Ordynsky Buryat and Aginsky Buryat Areas. In the first case the Buryat language status is defined on the territory of the entire region, in the second – within the given areas that are parts of Irkutsk and Zabaikalsky regions respectively. The spheres of use of the language are allocated. The communicative powers of the Buryat and Russian languages, fixed by law, are compared in the regions. By analysing the diachronous editions of regional laws the dynamics of changes in the legal position of the Buryat language is traced. The highest position of the language is in the laws of the Buryat Republic,

where, along with Russian, it is proclaimed an official language and can be used in the sphere of education at all levels: from pre-school to university inclusively. Moreover, Buryat laws contain requirements on the necessity of provision and observance of Buryat and Russian bilingualism in all public information on the territory of the republic. However, in some spheres, by the law, Russian (being the official language of the Russian Federation) can be used exclusively, such as organising foreign contacts, documentation and notary's activities, which indicates the factual functional discrimination between the two official languages of Buryatia. On the territory of Ust-Ordynsky Buryat Area, the laws of Irkutsk Region guarantee the opportunity of using the languages of the peoples of the area in the official spheres of communication, the creation of conditions for development of information and education activities in these languages, the design of multilingual signs and pointers, etc. In Zabaikalsk Region, which includes Aginsky Buryat Area, separate sections of the Charter of the region state the opportunity of using the Buryat language along with Russian, and the right of the citizens to receive and distribute information in Buryat via mass media.

Key words: sociolinguistics; language policy; forensic linguistics; Buryat language; state language; official language.

P. 22. *Kozhina Marina A.* Tomsk State University. **GENRE OF JUDICIAL SPEECH IN MULTI-DISOURSE STRUCTURE OF THE NOVEL *CRIME AND PUNISHMENT* BY F.M. DOSTOEVSKY.** In the framework of classical science development the study of judicial discourse is becoming more and more challenging, which makes the reference to F.M. Dostoevsky's heritage up-to-date. In the works of this author the problems of crime and punishment, which belong to the sphere of judicial discourse, are touched upon. Thus, judicial discourse is becoming a type of interaction in the framework of a certain social institution. The former undergoes certain changes in the novel as it is formed through the author's perception. Judicial speech as a genre of judicial discourse takes one of the central places in the novel *Crime and Punishment*, which is determined by the genre specifics of the detective psychological novel. The inclusion of the judicial speech into the novel structure and following its genre settings is necessary because it helps the author to create the social and historic truth and to achieve his communicative goals. The aim of this article is to analyse one of the realizations of the judicial speech in the novel. The scene of Luzhin's accusing Sonya of robbery is represented by the author as a mini-trial, in which each of the participants has his own communicative role. In the speech for the prosecution Luzhin-prosecutor adduces to the court facts and circumstances, which give evidence against the defendant, uses the strategy of accusation and assault with the aim of psychological influence on Sonya. The speech for the defence of Raskolnikov-lawyer represents a discussion, the aim of which is to disprove the point of view of the opposite side. The model of the judicial speech, which was built by the author according to the strict genre laws, is used by the author to test the characters' truth, in the result of which judicial and personal roles do not coincide. Language markers mark only the form of judicial discourse and the author transforms its content. The judicial speech is represented and described according to the genre form, which exists in judicial discourse. It is caused by several reasons. Firstly, the time when the novel was written coincides with the crisis of the judicial system of the 19th century and reference to this genre is very up-to-date. Secondly, the author longed for full authenticity in representing court examination and showing its inconsistency and the necessity of reforms. The change of genre setting is explained by evangelic discourse influence on the judicial one, the former taking none the less important place in the multi-discourse structure of the novel. The author's discourse prevails over the other types and changes them. The genre of the judicial speech of judicial discourse is submitted to the general communicative intentions of the author.

Key words: genre of judicial speech; multi-discourse structure; discourse of F.M. Dostoevsky; novel *Crime and Punishment*.

P. 26. *Comparelli Rosa.* Tomsk State University. **ROLE OF FIGURATIVE LANGUAGE MEANS IN MODELLING OF B. POPLAVSKIY'S POETIC WORLD VIEW.** B.Yu. Poplavskiy is a brilliant representative of the second generation of young Russian emigrants. Poplavskiy's lyric poetry is extremely vivid; therefore, in his poetry there are many metaphors, similes, epithets and personifications. In this work various figurative language means were examined used in the author's lyrics to express his poetic worldview. The analysis of figurative language has shown that in Poplavskiy's lyrics among lexical means, the most common is language metaphor, image-bearing word proper and author's metaphor. To a lesser degree of frequency are phraseological common language means and similes, which, in turn, are divided into the author's and the settled ones. Very often units occur, the figurative meaning of which includes representation from the metaphorical fields-sources of "Man" and "Animal" The central conceptual area of the field-source "Man" includes the frames of "social interaction" and "man's movement", that are mostly used. Images of animals are metaphorically projected onto a variety of aspects of reality: nature, man, transport, seasons, etc., and they present, in general, figurative analogy with the bird. In this field-source the majority of imaginative units reflect the flight of this creature. To a lesser degree of frequency are images of artefacts, natural phenomena, sensory indicators (tactile, visual and gustatory) as well as sounds, colours, and mythology. B. Poplavskiy's artistic worldview is a conceptual system of interrelated figurative images. The author's world concentrates around two contrasting spatial areas, "earth", where the main role is played by man, and "sky", represented by the bird's image. Poplavskiy's worldview struggles between two worlds: the world of man – Earth – where everything comes alive and moves, goes, slides, floats, and the world of birds – sky – which is the image of unlimited freedom and lightness. Since anthropomorphisms and zoomorphisms model the world through movement (man's or bird's) it may seem that Poplavskiy's world is very mobile, but in fact the global mood of recreancy from life reigns here. Indeed, the world is mobile in its parts, but this movement leads to immobility, that is death.

Key words: figurative language means; author's worldview; metaphorical models.

P. 30. *Nesterova Natalia G.* Tomsk State University. **COMMUNICATIVE-PRAGMATIC POTENTIAL OF EVALUATION IN RADIO PRESENTER'S SPEECH.** The choice of radio discourse is explained by the topicality of the study of the speech interaction problems in oral public communication. The change of the informative orientation for the communicative orientation in public discourse actualised the communicative-pragmatic approach of linguistic investigations and attention to the units of the communicative level, for example, evaluative expressive means, which are very important. The article is devoted to finding out the specific character of the evaluation realization in the spontaneous radio discourse. Evaluation is considered to be a means of the communicative level. An emphasis is made on the radio presenter's evaluation of pragmatic factors, which form the communicative situation. The author finds out evaluation and interpretation objects, evaluation types, expressive means of positive and negative evaluation and shows the dominating of the positive evaluative component. The positive evaluation objects are real studio guests, calling radio listeners, virtual participants of the radio communication (performers of the musical compositions presented on the airwaves), artefacts (events, reputable sources in educational programs, and so on). Negative evaluation can be given to the objective situation connected with the results of the radio listener's participation in the game, competition, and so on, and to the information discussed in the transmission. The author emphasizes the situations reflecting the so-called negative politeness based on the increase of the addressee's or presenter's status by the abjection of

one's own position. This communicative behaviour is considered to be a manipulative method. The realization of the intentional orientation on the opinion and evaluation explication in different genres of the spontaneous radio discourse is characterized by different expressive means. The absolute advantage belongs to the axiological vocabulary, in the core of which are adjectives and adverbs. A constant feature of this discourse type is its permanent opinion and evaluation expressing with an emphasis on the personal position that is marked by a personal pronoun, definite personal construction with the verb in the 1st person singular, special parentheses or constructions. The communicative function of the evaluative sentence in the radio discourse is concretised as regulating, stimulating and didactic functions. In the realization and perception of the positive or negative evaluation in the oral speech text a great role belongs to the voice, the intonation and the logical stress. The purpose orientation of the spontaneous radio discourse to the positive evaluation is connected with its orientation to the cooperative communication. As the evaluation nature reflects the inner world of the person, the domination of the positive evaluation in the spontaneous radio discourse allows classifying it as communicatively oriented to the harmonious interaction of the communication participants.

Key words: radio discourse; evaluation; radio presenter.

P. 34. *Orlova Olga V.* Tomsk State Pedagogical University. **SEMANTIC TRANSFORMATIONS OF CONCEPTS OIL AND WORK IN OIL-EXTRACTING AREA SMALL PRESS (BY EXAMPLE OF THE NEWSPAPER NARYMSKY BULLETIN).**

Media concept oil has a strong world modelling potential in oil-extracting areas, in which the traditional peasant culture was primordial, such as Parabelsky Area of Tomsk. At present, the expansion of values of industrial and urban-focused mass culture by means of local mass media, caused by the objective social and economic circumstances, is aimed at categorical reorganization, original recreation of the microcosm of the countryman by means of various semantic updating of semantic and axiological contents of traditional concepts of the national culture. The mechanism of consecutive transformation of the semantic structure of the country's radical values of culture with the support of the axiological structure of these values promotes the influencing force of the topical information-ideological trends broadcast by regional newspapers. With introduction of "oil" ideals in the associative-semantic field of texts in the regional newspaper, there occur mutation processes of transformation, reminding mimicry, in the semantic matrix of the fundamental cultural constants, such as concept *work*. In the Soviet press the matrix of the semantic cluster of this concept connected with the meanings *difficult, heavy, hard work* transformed due to the promotion of the semantics of *intensity* of work and its *heroisation*, which meant closer rapprochement, even imposing of utilitarian-practical and spiritually-moral axiology of work. Our research has revealed further evolutionary transformations of the analysed fragment of the collective picture of the world. The research has shown that basic clusters of the concept *work* "mutate" at the expense of substitution of primordial semantic signs with similar, but essentially different ones: the utilitarian-practical cluster earlier accumulating the axiology of difficulty and intensity of efforts is replaced with the axiology of technical complexity and industrial scientific capacity; the spiritually-moral cluster with the earlier imperative of an ethical debt is replaced with the axiology of fashion, popularity, elitism and social prestige. At the same time, the abstractness and difficulty for understanding of the specificity and organization of work in the oil branch by an ordinary countryman, the lack of definition and the "virtuality" of empirical results of this work demanding special knowledge and high level of erudition force journalists, on the one hand, to write using abstract pseudoscientific language, on the other hand, leave the oil problematic out of the ethical standards of traditional rural culture. As a result, it causes mistrust to aims of civilization and progress imposed by oil.

Key words: media concept; semantic transformations; regional picture of the world.

P. 38. *Sadykova Irina V.* Tomsk State University. **GENETIC AND AREAL AFFINITIES OF THE LATIN VERB "AUDIRE".**

Human beings learn the world in the first place with the help of different senses: hearing, sight, taste, smell and touch. The sense perception then is followed by the process of comprehension with the help of mind. The perceptive cognition of the environment could be pre-conscious and independent from the person as well as conscious and intentional, whereas the rational cognition could be only conscious. All these cognitive processes are anyway reflected in the language, since learning the reality a man always names cognised objects. The article below covers the analysis of the verb *audire*, which is the basic sign for auditory perception in the Latin language. The lexeme *audire* is a polysemantic word with 8 alternants. Interestingly, only first two basic meanings ("to hear", "to listen to") are directly connected with perceptive semantics. The other alternants have, either explicitly or implicitly, the meaning "to hear", "to listen to" as the semantic centre, but their denotations are already related to the process of comprehension, to the result of the heard or the understood. Therefore, we can easily see the changes in the subject-object relations in the semantics development. The verb *audire* is derivatively active. Its derivatives could be semantically divided into several groups: 1) the lexemes indicating the process of auditory perception (*audientia, auditio, auditus*), 2) the lexemes naming the actor, i.e. the listener (*audiens, auditor*), 3) the lexemes meaning the result of auditory perception or its object (*auditiio, auditiuncula, auditus*), 4) the lexemes naming the very hearing sense (*auditiio, auditus*), 5) derivative verbs (*auditare, oboedire*). Speaking about the genetic affinities of the verb *audire* we can mention that originating from the Indo-European root **au-* it has a plenty of kin lexemes in other Indo-European languages. These kin words are formally connected with the root but have different expanders such as **-is-*, **-m-*, **-si-*. The semantic content of the kin words is rather wide: from the general to the concrete auditory and visual perceptions on the one hand, and from the naming of human mind to the designation of thinking process on the other hand. There are also some lexemes (ancient Indian, ancient Greek, Baltic), which can combine perceptive and rational meanings in their semantics. Various semantics and the problems of meanings partitioning in some languages (e.g. in the ancient Greek), when the semantics of one word contains both auditory and visual perceptions of the environment, could mean a long and difficult way of semantics formation, which appears by lexemes naming concrete perceptions. The existing lexical material proves that the primary semantics of the Indo-European root **au-* "to perceive, to sense, to comprehend" finds reflection in the descendant languages.

Key words: Latin language; auditory perception; etymology.

P. 42. *Sedelnikova Olga V.* National Research Tomsk Polytechnic University. **PROBLEM OF PAINTING GENRES IN APOLLON MAIKOV'S ARTISTIC CRITICISM.**

In the evolution of European aesthetic thought of 1840s, a key role is played by ideas on the new content of traditional categories of historical poetics. In this context, the problem of genre in Apollon Maikov's articles on exhibitions in the Academy of Art assumes significance and deserves a special attention. When Maikov mentions the traditional system of painting genres, which uses a formal approach of outward relation of the depicted subject to the general theme to divide all art works into historical, portrait, battle, landscape, marine and genre paintings, he emphasizes the obsolescence of such approach. In the traditional understanding of the content of each definition, which was influenced by the authority of the earlier theoreticians and historians of art, primarily by R. Mengs, painting genres were divided into worthy and unworthy, or secondary ones, the same way literature genres

used to be divided into high and low ones. Quite naturally, historical, mythological, battle paintings and partially portraits referred to the former category, while landscape and genre painting were attributed to the “low”, or unworthy genres. The cultural process of the 19th century witnessed a significant rise of “low” genres, i.e. landscape, genre painting and psychological portrait. Academic theoreticians and critics of art viewed these changes as a sign of extreme eclecticism and, therefore, of decline of painting, of loss of its previous dignity and perfection. In Maikov’s opinion, the position of theorists utterly contradicted the reality, where new perfect works of art were created that attracted widespread attention and demonstrated that art had embarked upon a new stage of development. The critic asks himself about the reasons of such a contradiction. In this context, the problem of re-evaluating the epistemological essence of certain genres of painting becomes of special importance for Maikov. Upon re-evaluating the ideas of theoreticians about the decline of contemporary art, Maikov comes to a conclusion that artistic criticism, unlike literary criticism, lost the link to the present. Theoreticians were too reverent of the achievements of painting of the precious epochs and thus lost the historic perception of a work of art. They failed to notice that the “spirit of the age”, which determined the content of art at all times, had changed. Under its influence human consciousness had also changed, together with the system of values and the nature of person’s spiritual needs. As a result, in the mid 19th century art practice; there was a deep re-evaluation of the traditional genre forms, with landscape and genre painting becoming the leading genres of the time. Maikov develops a new approach to interpreting the category of genre. It is based on understanding the contemporary trends in art and a subtle connection between the “spirit of the age” and the subject of depiction. In his reviews and articles Maikov asserts the vital need for the new interpretation of the content of traditional genre forms. It was for the first time in Russian art studies that the critic established the bases of the new theory of painting genres.

Key words: artistic criticism; aesthetics; genre; historicism; history of art; “spirit of the age”; art content.

P. 48. *Frantsuzskaya Yevgeniya O.* National Research Tomsk Polytechnic University. **CONCEPT AS A DIACHRONIC PHENOMENON (ON THE BASIS OF THE REPRESENTATION OF THE MEGACONCEPT *TEA* IN THE ENGLISH LANGUAGE).** The author shortly reviews the use of the comparative methods in linguistics, the main terms (mapping and comparison) and the application of synchronic and diachronic approaches in both intralingual and cross-lingual research of phenomena. The given article analyses the process of formation and development of the concepts comprising the megaconcept, represented by the lexeme *tea* on the two historical stages. The tertium comparationis is indicated by split-level concept representation linguistic means and also by the similarities and differences of their content semantics in the periods. The conceptual analysis and other cognitive research methods allow revealing the existence of the cultural megaconcept verbalized by the lexeme *tea* in the English cognition. The megaconcept *tea* consists of three concepts; each of them represented by the word *tea*: a) the simple common concrete concept *tea*, which began to form at the end of the 17th c. – the beginning of the 18th c., which is related with the beverage of tea; b) the multi-layered cultural concept, including the basic level, tea as a beverage, and four cultural cognitive layers (tea as medicine, tea as a way of communication, tea as a sign of hospitality and good attitude, tea as a way of spending time) and two segments: a) tea as a meal, having two layers (tea as a process of eating and tea as time of the day) and b) tea as a social or family event. The concept periphery is represented by set-expressions and slang; c) the new concept tea in the meaning of a meal, formed in the second half of the 20th c. The existence of the three components is verified by the lexical collocation of verbs with the lexeme *tea* in different historical periods. The formation of the simple common concept starts at the end of the 17th c. as the English get acquainted with the beverage itself. There are no traditions of tea consuming in the period and some oriental rituals and dishes are used. Tea is served in a cup without handles – *a dish of tea*; the most frequent collocation is *to drink tea*. The 19th c. is the height of the tea culture in England when all the tea-consuming traditions are formed in all the social layers; there appear some peculiarities in the gastronomical component of the meal and the time of having it. On this stage all the additional cognitive layers and segments of the concept are compiled. Tea is served in a cup – *a cup of tea*; the most frequent collocation of the lexeme tea is with the verb *to have*. The most serious changes in the tea culture take place in the second half of the 20th c. Tea yields its positions to coffee, alcohol and soft drinks. However, tea remains the symbol of English culture. Tea as a meal enters the system of English meals; the beverage itself is not its essential constituent any more. There appear the following collocations of the lexeme tea with the verbs to make, to cook, to eat in the meaning of preparing or eating the cooked food. The concept formed in the mid 20th c., which has firmly embedded the paradigm of meals, presents itself as the English culture exclusive identity.

Key words: megaconcept; concept; diachrony; gastronomical component; lexical collocation.

PHILOSOPHY, SOCIAL AND POLITICAL SCIENCES

P. 51. *Gyngazov Roman P.* Tomsk State University. **POLITICAL EDUCATION AS A MEANS OF INFLUENCE ON POLITICAL ELITE RECRUITMENT PROCESS.** Considering political processes, one of the most important mechanisms can be singled out that determines the other components of the political sphere to some extent. As we see it, political elite recruitment can belong to this process. Meanwhile, in the diversity of mechanisms affecting the logic of political elite recruitment, the author singles out political education as the process that can model ideas, values, beliefs, contacts network, communication between individuals, social hierarchy. The article highlights that political education implicitly – with the help of social institutes and values – affects the models of political elite recruitment, conservation/transformation of the existing power relationships in politics. Having applied the social structure model proposed by P. Shtompka, the author gives his vision of the relation between political education and political elite recruitment at different levels – the level of institutionalisation of the normative structure, the level of articulation of the ideal structure, and, finally, the level of the interaction structure expansion. The work defines such notions as potential and existing elites; it also describes various approaches of entering the power elite. The author describes different types of recruitment to track their connection with the process of political education. Guided by the model proposed by T. Parson, the author of the research concludes a direct relationship between the level of political education and its potential capacity for ascending social mobility within the power hierarchy of the modern world. The work emphasizes the fact that in world practice there are a number of precedents of qualitative upgrade of political elite with the help of political education. However, despite the great potential of employing political and educational practices for forming/recruiting political elite, in Russian reality there is no specialized system that would be able to improve the professional level, on the one hand, and contribute to social mobility, on the other hand. Meanwhile, the development and deployment of political education intended to upgrade the quality of potential political elite and increase the competence of the existing one will definitely increase the efficiency of the process of making political decisions at all levels of power.

Key words: recruitment phenomenon; formalization; capitalization; social structure model.

P. 55. *Dureeva Natalya S.* Siberian Federal University (Krasnoyarsk). **CONCEPT OF THE MODEL OF THE WORLD IN SCIENCE.** The topicality of the scientific concept "Model of the World" consists in the fact that it gives the methodological orientation in searching of objects and phenomena and creates the common strategy of researching. The researchers of many different spheres of science (psychologists, sociologists, physicists, mathematicians, informational technologists, and so on) use the concept "Model of the World" in their scientific practice. But they use the concept as a methodological device as it necessary for them. So, there are authors who use the concept "Model of the World" as an artificial construction of a new reality, others – as an objective reflection of the existent reality. The article is about the features of using the concept "Model of the World" in different spheres of science. It is explained how it is used in the humanities (philosophy, sociology, psychology, logic), in the applied spheres of science (mathematics, computer science, physics, chemistry). So, the broad application of the concept "Model of the World" is shown. In the article approaches are differentiated to using the concept "Model of the World". It is proved that the model can be used as a construction of a new reality and also as an objective reflection of the existing reality. The article includes different definitions of the concept "Model of the World", which belong to researchers of different spheres of science. So, the concept is defined as the virtual shape of environment, "the card of reality", the object, which copies features of another object, an abstract system of calculative equalizations and formula, an aggregate of probabilities of existence of some versions of development of natural evolutionary process, accumulation of life experience and using it in real life, an all-embracing dynamical system of ideas, a complicated system of relations between man and environment and also the wholeness and unity of the World on the biological level. In the article the main principles and functions of models are exposed of the theory of cognition, their main ways of building, gnoseological and methodological meanings. So, there exist the main functions of the model of the world. First of all, it is the source of hypotheses. Second, it forms the human's personality. Third, the model determines the human's valuables. Fourth, it accumulates ideas and schemes in the human's consciousness. At last, it plans activities of the person. So, the "Model of the World" is an all-embracing concept. It forms with substantial characteristics of the world, which express the topical qualities of historical traditions of scientific cognition. The concept is a methodological device used in two opposite theoretical systems: metaphysical and dialectical. Within metaphysical methodology the "Model of the World" is an abstract and formalized system, which helps to research and explain real life processes. Within dialectical methodology the "Model of the World" is an aggregate of knowledge about the World acquired and accumulated by social experience.

Key words: model; modelling; metaphysics; dialectic; methodology.

P. 59. *Khamrina Yulia A.* Tomsk State University. **REPRODUCTION OF THE SOCIAL THROUGH RITUAL.** The role of the ritual in the process of reproduction of the social is considered in the article. This role is determined to a large extent by its interactive character. Interactive ritual represents a micro-situation developing here and now. It unites the society into a single whole, enables it to preserve its integrity, which is established due to the fact that rituals restore the general emotional background of the participants. While fulfilling rituals the focus of attention is intensified on a certain aspect. It is considered that the importance of a ritual action in appearance of the social in people's lives in modern society could be revealed through the analysis of its functions: 1) socializing function, 2) the function of social memory preservation, 3) ideological function, 4) the function of subjectivity reproduction and 5) innovative function. 1. A ritual performing the socializing function prepares an individual to the social life, cultivates the qualities, which are of high importance for his/her life in a society. 2. The function of social memory preservation is connected with the maintenance of the traditions and values established in the society. That is why the rituals should be repeated from time to time in order to actualise the experience of previous generations in individuals' minds. 3. The ideological function is connected with the fact that an individual taking on society's norms and values finds oneself involved in the ideological process of meanings institutionalisation. Only those norms, which lie in the basis of the society an individual belongs to, penetrate an individual's mind without any reflexion. 4. The function of subjectivity reproduction in the ritual is realized through personal transformation occurring under the influence of this ritual. 5. The innovative function consists in the ability of the ritual to generate something new. It enables to discover and establish new social meanings and values both in an individual's and public conscience. The analysis of the main functions of ritual actions showed that they are able to form communities. A ritual, whether it is social, religious, political or individual, inevitably exists in the life of every member of the society owing to the social structure. In this respect the ritual as the principle of society formation and harmonization has the ontological status: it generates and makes the being stable at least for the participants of the ritual. Therefore ritual exists everywhere in modern life as a mechanism of people's uniting and as a basis of sociality. This condition also determines the role, which rituals continue to play in modern society.

Key words: social ritual; interactive ritual; functions of ritual.

HISTORY

P. 63. *Gribovskiy Mikhail V.* Tomsk State University. **DOMESTIC UNIVERSITIES AT THE TURN OF THE 19–20 CENTURIES AS A FACTOR OF MODERNIZATION OF RUSSIA.** In modern Russian society the discussion on modernization of Russia and ways of its realization has developed. It is obvious that science and the education system can become the locomotive of the modernization process. It makes us refer to the experience of functioning of the domestic higher school, in particular – universities. The article is devoted to the question of participation of universities of the Russian Empire in the processes of modernization of the country at the turn of the 19th–20th centuries. Qualitative changes of Russia through the registration of bases of the capitalist order in economy and transformation of the political system were the central concept of the specified period. Universities participated in modernization processes through professional work of professors and teachers, and also by means of political activity of teachers and students. The purpose of the article is to draw a wide panorama of university life of Russia in the conditions of modernization changes of the turn of the 19th–20th centuries; to show the role and place of universities in these processes; to statize the problem of participation of current Russian universities in the course of present-day Russia modernization. By considering the university professors' history in modernization context, two aspects attract attention, which, at first sight, are not connected with each other, – science and policy. On the one hand, professors and teachers provided progress in various spheres of knowledge by carrying out scientific researches. On the other hand, the university public, as the carrier of mainly democratic views, took part in modernization of the political system in the Russian Empire in the beginning of the 20th century. Two lines of participation of the university professorate in modernization processes in Russia – scientific and political – quite often coincided. The largest university scientists were in ideological opposition. The Russian students on the boundary of the 19th–20th cc. turned into an appreciable political force. At the beginning of the 20th century universities were shaken by numer-

ous students' actions. Students at times were radical, but by their activity they pushed the authorities to political changes. Thus, students' movement can also be considered as modernization factor. If modern universities want to be one of modernization motors, they should become not only the supplier of educational services, but also a place of formation and distribution of new society and experts.

Key words: university; modernization; professors; students.

P. 67. *Dolgushev Dmitriy V.* National Research Tomsk Polytechnic University. **ENERGY SECURITY IN THE BEGINNING OF THE 21 CENTURY AND SECURING THE SUPPLY OF RUSSIAN LIQUEFIED GAS ONTO THE NORTH AMERICAN ENERGY MARKET.** Living in a rapidly changing world we are witnessing a variety of global transformations worldwide. With the end of the 20th century, the "oil era" – as major oil producers and consumers called the past century – comes to an end. Some say, that with the beginning of the 21st century begins the "era of gas", because it is considered the most ecologically friendly and the cleanest energy resource of the future. The only demerit of gas as an energy resource is that it is a non-renewable and an exhaustible natural resource. The article concentrates on two major countries possessing a great potential in the energy sphere – Russia, as one of the main producers and suppliers, and the United States, as one of the main consumers. Their relations in the sphere of energy policy determine main world energy tendencies and strategies, and are reflected in many ways in the foreign policies of the countries, which are involved into diverse global energy processes. The scientific approach to studying those global energy processes requires methodical systematisation, constant analysis and in-depth study of various fields of science relating to the energy sphere. Developing international relations in the sphere of energy has become the key task for Russian Federation diplomacy in the modern world. Energy security issues are becoming determinant objectives of the United States national security doctrine. Providing unlimited access to the global energy resources, providing control over main world regions rich in energy has become the main line of American energy policy. The article illustrates the position of Russia in the world energy market, conditioned by the United States' dominating position in the energy sphere, the Russian site of action in the world primary energy market gives some clues to Russian energy policy tendencies, and defines possible strategies for Russian energy export further development. The article underlines the importance of the supply of Russian liquefied gas onto the North American energy market. It matches the ultimate aims of both Russian and American energy policies and current strategies – on the one hand, it is to provide access to the energy resources, and, on the other hand, it is to enlarge the strategic partnership and to obtain new markets with long-term prospective. The article defines some of the main challenges in this energy strategy and describes how it influences the energy security and strategy for both major players in the sphere of energy policy.

Key words: energy market; gas; USA; Russia.

P. 70. *Dumbinskaya Tatiana I.* Tomsk State Pedagogical University. **PROBLEMS OF CHILDREN NOURISHMENT ORGANIZATION IN WEST-SIBERIAN REGION DURING THE GREAT PATRIOTIC WAR (1941–1945).** All the years of the Great Patriotic war the food supply was a very urgent topic. Organizing full nourishment for children was especially hard. Nevertheless, the government tried to solve the problem. Above all, better nourishment for pregnant women was organized at the expense of increasing the limits of product distribution. As many orphan-babies appeared during the war; and parturient women often had no breast milk because of stress and bad nourishment, there was a necessity to introduce a new form of service for small children: they organized the collecting of donor milk at specially made stations, extended the system of milk kitchens for 1–3-year-old children, which provided milk mixtures for needy people. Preschool children were fed in children's canteens, where children of soldiers were registered. Schoolchildren had the scantiest ration, that is why farms were formed at children's institutions to provide additional calories for children. The limits of product distribution were revised. During the war, great attention was paid to enrichment of children's nourishment with vitamins, the source of which was wild plants. Special instructions and recipes of producing decoctions, stocking of medicinal plants and berries for winter were developed. Organizing children nourishment in West Siberia was hard, especially in the first period of the war: the great flow of evacuated people, the extreme lack of finance, products, and all other facts made the solving of problems difficult. At this hard time, not all the Soviet citizens acted like humanists and patriots. There were people who wanted to make good at state and children's expense. However, it is necessary to say that the state fought against the improper use of children's fund products, their squandering and direct larceny. The system of punishment was rather severe then. Thereby, despite the great number of problems which government had to solve, children were not forgotten. The state Soviet institutions and society were involved in solving the problem of children's nourishment. As a result, the main purpose, to improve the conditions for children's survival in such hard time, was reached.

Key words: Great Patriotic War; children; children's institutions.

P. 74. *Dyatchin Nikolay I.* Altai State Technical University (Barnaul). **INTERACTION OF SCIENCE, ENGINEERING AND PRODUCTION IN THE HISTORY OF TECHNOLOGY AT THE INSTRUMENTALIZATION STAGE.** The article examines the instrumentalization stage – the first in the history of technology development period of interaction between science, technology and production. Science in its infancy existed in the form of natural philosophy. It was rooted in mythology and provided little or no impact on production. Production experience accumulated slowly in the form of specialized tools and manufacturing operations, it was of empirical character, and could not be generalized theoretically. But even then, the needs of practice facilitated the development of mathematics (arithmetic and geometry) and mechanics. This was reflected in the works of Pythagoras, Euclid, Aristotle, Archimedes and other great scholars of the Antiquity. But in the slave era, science was still far from production and remained employed in supporting the minority, the aristocratic part of society. Great achievement was the creation of the Eneolithic writing. It provided a fixation of the accumulated industrial experience and technological expertise, contributed to the rise of science and culture. The birth of engineering activities related primarily to construction and architecture. Engineers did not only develop projects of complex structures, but also supervised the labour of slaves. The most important achievements in production were the invention of the loom, smelting of ores and metal machining. It was of great significance for the other branches of engineering and agriculture. Production of steel provided the tools of artisans, and warriors weapon of high hardness, strength and sharpness. Thus, at the stage of instrumentalization using the tools replaced the function of direct contact between the human hands with the material being treated. The effect of this interaction is repeatedly reinforced and contributed to the rapid development of metal machining and other hard materials. Later simplest mechanisms began to appear: levers, rollers, blocks, etc. Then, at the final stage, there were mills, bows and arrows and throwing complex machines: ballista, catapult, etc. In the mills, Marx already saw all the main elements of the machine.

Key words: interaction; history; techniques; science; manufacture; stage; development; instrumentalization.

P. 77. *Ijendeev Aleksey Yu.* Tomsk State University. **ADMINISTRATION OF TOMSK RAILROAD IN 1917–1920.** The article describes the administration systems, which were used at the Tomsk railroad during 1917–1920. There were 3 such systems: system of Provisional Government, system of socialists and system of the Provisional Siberian Government and Kolchak government. World War I led Russia to social, economic and governmental crisis. When in February of 1917 the government changed in Russia, there was a new model of administration set. The Provisional Government tried to democratise Russian society and administration. It was considered that people should be given more authority. By this policy the old administration of Tomsk railroad was destabilized, organizations of workers and servants came into view and began to struggle for domination. New organizations insisted on reduction of working hours, social improvement and dismissal of some railroad agents. The old administration was not active and could not win intentions of workers and servants to set self-administration. As a result, collegial administration was instituted at the railroad in February of 1918. Instead of one railroad director, the main executive committee was established – a college (three or five persons), which was elected by workers and servants of the railroad. In the departments of the railroad colleges were also established. But the activities of that collegial administration led to a transport crisis. This administration was slow and could not solve problems in time. There was an attempt to set a Bolsheviks' commissar, who would be the head of the railroad and would act faster than colleges, but at that time a change of government in Siberia happened. So, when the Bolsheviks were unseated in May of 1918, the Provisional Siberian Government and then Kolchak government adopted a policy of reestablishment of traditional methods of administration. These methods were based on the principle of personal leadership – the post of the railroad director was reset. Trade unions were admitted on condition that they would not intervene in the management. Collegial administration of workers became outlaw. Military forces were used to keep down workers organizations; the state of martial law was brought into being at Tomsk railroad. The old norms of labour were reset. These measures allowed improving traffic, but the civil and military policy of Kolchak government was losing. When the Bolsheviks won the Civil War, a commissar headed the Tomsk railroad (in January of 1920). It meant that new all-Russian government reoriented at reducing of self-administration in the society.

Key words: Tomsk railroad, administration, revolution, Civil War.

P. 81. *Kartashova Tatiana P.* Tomsk State University. **FREE PUBLIC LIBRARY IN TOMSK: PECULIARITIES OF STOCKS FORMATION AND FINANCING RESOURCES.** A new type of popular library – free public library appeared throughout Russia in the second half of the 19th century. Their mass appearance was connected with the reforms of the 1860s when the demand for competent workers and peasants increased. The first free library in Siberia was opened in 1884 at the initiative of the Elementary Education Care Society created by P.I. Makushin in Tomsk. Considerable means and Society funds were assigned to buy furniture and books; a special subscription was opened. A two-storeyed building was constructed specifically for the library in 1887 on means of a merchant S.S. Valgusov. In the first years of its work the library did not draw attention of administration, and its stocks were not checked. But in 1888 a number of statutes, which limited the sources of books acquisition were issued. Approximate catalogues of the most suitable books for public libraries were made; censorship appeared not to allow undesirable literature in the libraries. After issuing of the “Rules on free public reading rooms and order of their supervision” in 1890, a special rank of an observer over the public library and especially over its books acquisition was introduced. The observer's activity on auditing of library stocks revealed numerous infringements in the work of librarian N.F. Davidovich that later led to her dismissal. The library was financed on the means of a civil society organization, which supported elementary schools and other cultural and educational establishments. Therefore, the library budget on purchase of new books was limited, and available books decayed quickly. The library started to receive donated books, but only insignificant part of them could be accepted into the library stocks because of restrictive catalogues. At the beginning of the 20th century the financing of the Society's library and replenishment of its stocks increased, the quantity of readers whose opinions and preferences should be taken into account increased sharply, too. Though the free library was the largest in the city by the number of readers, the main categories of its subscribers were pupils and women engaged in housekeeping. These categories of readers had much more free time; and reading was a pleasant entertainment at their leisure-time. Summing up the work of the public library, it is necessary to notice that keen interest in public library activity and quality of its stocks appears in Siberia only at the beginning of the 20th century, which could be explained by the increased quantity of readers. Being a source of pride for the Care Society and the whole city, the free library was notable for the greatest quantity of readers while there was scanty financing on new literature purchase, a considerable quantity of unclaimed literature and impossibility to buy the necessary book because of restrictive catalogues. Preferences of unpretentious readers influenced the specificity of library stocks formation in many respects.

Key words: Library science; Tomsk; free public library.

P. 85. *Kinyov Sergey L.* Tomsk State University. **PRINCIPLES OF INHERITANCE OF POWER IN RUSSIA OF THE 14–15 CENTURIES IN THE NATIONAL HISTORIOGRAPHY.** The article describes the hereditary principle of the Grand-Duke (Veliky Knyaz) title in Russia of the 14th–15th centuries. It contains the review of historiographic research of this problem in Russia. It is particularly focused on the thesis of opposition between two hereditary principles – the so-called “old” one based on the ancestral seniority, and the “new” one based on the direct descending line. The idea of these two “laws” in opposition belongs to N.M. Karamzin. It is to be noted that as a support to the new hereditary principle of the Grand-Duke title he refers to the text of the Agreement, which says nothing of heredity. The disciples of the so-called state school developed this idea, referring to their distinguished predecessor among others. M.S. Solovyev believed that the traditional relations among Grand and appanage dukes disappeared in the 1280s–1290s, as ancestral seniority was substituted by the law of might. Only at the turn of the 14th–15th centuries the new principle was formed. This theory raises two crucial questions. The first is how the society could exist in the state of anarchy described by the author. The second is why under such circumstances the process of developing of the new hereditary principle of the Grand Duke title took about 150–200 years. This classical theory finally established due to V.O. Kluchevsky, who believed, that within 100 years since the time of Ivan Kalita (the Moneybag) the Dukes of Moscow acquired a tradition to heir the seniority on the direct line descending. However, the analysis of certain cases when the Grand Ducal power was handed over in the period from 1340 to 1420 and even to 1460 gives no ground for this conclusion. The conservation of the theory of struggle between these two tendencies can be observed in the research by A.E. Presnyakov, who, though criticizing S.M. Solovyev, accepted his general scheme. Soviet historians did not pay much attention to the problems of succession to the throne in the medieval Russia, but describing the process of formation of the unified Russian state on the social and economic basis, they relied mainly on the previous theories. Similar to their predecessors they took it for granted that by the end of the 14th century the new hereditary principle of the Grand Duke title had become “legitimate”. It leads to the question of how such a repetitive violation of law could become a new law. Another thing, which attracts attention, is the lack of the ground for such a

conclusion in testaments and agreements of the Dukes of Moscow. In the post-Soviet period this scheme underwent no principle change. Some historians treat the political relations in Rus in the traditional historiographic sense paying no significant attention to the problem of enthronement. Others try to develop new approaches to the political history of the Medieval Russia. In the latter case they either mean the problem definition or reproduction of the old schemes of the state historical school with cultural annotations added. To sum it all up, we can say that nowadays the political history of the North-Eastern Rus of a certain period is based on the same grounds as 100–150 years ago. This recurrence from Marxist principles to even older ideas is a sign of stagnation in research of Russian history of the 14th–15th centuries.

Key words: North-Eastern Russia of the 14th–15th centuries; interprincipality relations; Grand Principality; succession; historiography.

P. 93. *Konkov Dmitriy S.* Tomsk State University. **TRANSFORMATION OF GOTHIC POWER INSTITUTIONS DURING THE MIGRATION TO THE ROMAN TERRITORY.** The article is devoted to the period of 369–382 A.D. It was the time in the history of the Goths and the Roman Empire, when there was a direct clash of the Romans and the Goths. It seems that this was the key period for the Barbarians and for the Empire, as during this time the Goths changed the status of the border residents-federates to the habitants of the empire. Transformation of the power institutions of the Goths in connection with this change is considered in the article. It seems certain that the leading impetus for this transformation was a system need to interact with the empire. The article presents the interaction strategies that were used by the Gothic chiefs, as well as Roman emperors; their success or failure on the way to integration of the Goths in the imperial structure. Sustained contact of the Goths and the Empire created a necessity of the formation of representatives and power structures. These contacts were limited to treaties based on individual agreements of the leaders of the Goths and Romans. The treaty extended for patrilineal descendants of these leaders. This stimulated the transformation of power institutions of the Goths in the direction of centralization. On the territory of the Empire the dominant trend is the integration of Gothic tribal institutions in the Empire, the situation of crisis of identity and multiple alternatives in the Gothic history. The Empire's institutions are not ready for a possible settlement of the barbarians on its territory. The events leading to the Battle of Adrianople and following it prove it. In such circumstances, the Goths are returned to the traditional dominant tribal relations – coordinated raids of any kinds. There is disorganization of power institutions in the Gothic society in the crisis of the Gothic-Empire relations. Signing a treaty with Theodosius marks the end of this period, but the system of these relations is naturally different now than before. Theodosius maintains separate Gothic clans to prevent any new general representative of what appears to be reasonable in order to ease the Gothic military capabilities in the situation of confrontation with the Empire and promotes the Roman hierarchy in the Gothic society. Strengthening Gothic integration in the Roman army meant the growing importance of the Roman military status for the Goths. The death of the Emperor put an end to the new system of relations between the Goths and Romans in the borders of the empire, and marked the beginning of spontaneous search for alternative strategies for the development of the power evolution of the Gothic society.

Key words: Goths; barbarian; late Roman Empire; political identity.

P. 99. *Kosterev Anton G., Litvinov Aleksandr V.* Tomsk State University of Control Systems and Radioelectronics, Tomsk State University. **TOMSK SCIENTIFIC AND PEDAGOGICAL COMMUNITY IN 1920S: SOCIOPOLITICAL EVOLUTION.** In the article one of the most interesting periods in relations of the Soviet state and intelligentsia is considered. The period of the 1920s is characterised by complexity and discrepancy of political, social and economic processes. Sharp change of the political climate, deterioration of the social status and radical reforms in the higher education sphere were a strong blow for the scientific and pedagogical community. Nevertheless, the heterogeneity of pre-revolutionary intelligentsia caused ambiguity in event estimations. In this respect, long and difficult evolution of relations of the Soviet management and representatives of physical science is indicative. The specified period is considered in the foreshortening of the processes of institutionalisation of the Soviet physics. Originally, the repressive policy of the Soviet state caused sharp rejection by the local professorate. In due course the situation gradually changed. Political disagreements closely intertwined with certain coincidences of interests. As a result, the first decade in life of the Soviet state generated some models of adaptation of scientists and teachers to new conditions. Along with sabotage and passive resistance to the conducted reforms of the higher school, organizational cooperation took place; there were processes of integration of scientific and pedagogical community with the Soviet society and its imperious institutes. The comprehension by the party-state management and most socially active part of scientific elite of the objective necessity of mutually advantageous cooperation led to original mechanisms of symbiotic communication between them. Nevertheless, the processes occurring during the 1920s did not change the overall picture of mutual relations of the power and higher school intelligentsia radically. It testifies that the scientific and pedagogical structure of university at that time was not defined in how to behave in relation to the Soviet power. Likes and dislikes existing at that time led to the strong pressure, which arose in the environment of scientific and pedagogical intelligentsia. The principal cause of it is the heterogeneity of pre-revolutionary intelligentsia as a social group. In the article by examples of leaders of local scientific community various forms of interaction of science and the power, which by no means were reduced to open opposition, are considered.

Key words: science; higher education; intelligentsia; Soviet state; Tomsk.

P. 104. *Mirkin Vladimir V.* Tomsk State University. **MODERNIZATION OF TELEPHONE COMMUNICATION AND FIRST AUTOMATIC TELEPHONE EXCHANGES IN WESTERN SIBERIA (1920–1940).** The article reviews the main directions of development of telecommunication in Siberia, measures of reconstruction and rehabilitation of backward telephone services. Siberian phone took a secondary position among the other sub-sectors of communication. As a solution for the recovery of this type of communication from recession modern automatic telephone exchanges were built. Pre-war five-year plans in Western Siberia were marked by rapid development of telecommunication. During this period, a large number of small departmental exchanges were built. The main objective of the recovery period was reconsolidation and preservation of telephone services. In the mid 1920s the USSR began to establish and release domestic station equipment and telephones. Until 1924 the Siberian phone service satisfied the needs of communication only within settlements, especially cities. Since 1924 there are intercity and rural telephone services. The first long-distance Siberian lines were not of good quality, as they were arranged on a telegraph wire, and fitted on the switches, borrowed from the urban telephone network (UTN). Nevertheless, the discovery of long-distance communications was an important event for the Siberian city dwellers. The development of UTN increasingly revealed the need to replace manual telephone exchanges servicing with automatic telephone exchange (ATE). In the years of industrialization, it was important not only to maintain high rates of telephones, but also to move to a qualitatively new level, due to the increased social and economic demands, as well as the rapid development of technology. In addition, the use of ATE allows solving one of the most important issues –implementing regionalization of urban telephone networks, and thereby

reducing the amount of line structures by reducing the length of subscriber lines. The oldest Novosibirsk ATE was built in late April and put into operation May 15, 1931, which was 4 years before similar stations started in Sverdlovsk and Perm. Novosibirsk ATE was the first station, which was completely made in Soviet factories. The adoption of domestic industry production of manual and automatic telephone exchanges constituted the basis for the development of local telephone networks in Siberia. For the first five-year period the length of telegraph and telephone networks in Western Siberia increased by 50%; a new line of direct communication with Moscow and Ural was put into operation; the telephone network covered 19% of village councils. Despite this, Tomsk automatic telephone service came to the university only after 17 years, in 1946. Thus, in spite of the plight of the communications industry, the high rate of telephones in the Siberian region brought a positive effect. In the mid 1920s in Western Siberia long-distance and rural telephone communications appeared and developed, and in the 1930s – 1940s local telephone networks were not only reconstructed, but also partly modernized.

Key words: telephone; Siberia; Novosibirsk; wired communications equipment; automatic telephone exchange.

P. 107. *Miroshnikov Maxim S.* **EXPLANATION OF NATIONAL EUROPEAN PARTIES' POSITIONS ON COMMON FOREIGN AND SECURITY POLICY OF THE EUROPEAN UNION IN THE BEGINNING OF THE 21 CENTURY.** This paper researches positions that leading national political parties in three European countries (Germany, France and United Kingdom) have towards the Common Foreign and Security Policy of the European Union. The basis for research is the parties' manifestos for the last two electoral periods. Comparison of these documents made it possible to reveal similarities and differences in partisan stances towards the Common Foreign and Security Policy of the European Union. The article presents three main findings of the analysis. First of all, there exists a national consensus between the major political parties in all three countries on the issue of necessity of integration of cooperation in the field of foreign policy and security. Second, there is visible convergence of partisan stances within France and Germany with infinitesimal differences; and there are differences between parties when compared between states. At the same time there is a very big gap between the position of the Conservatives and the Labourists in Great Britain. Third, there is an all-European consensus between all the major parties about the character of threats that present danger to their national countries and sort of instruments that should be used to tackle them. The attempt is made to measure the difference between parties' positions. The main aim of this paper is to find out why these convergences or divergences occur. Two hypotheses are made to explain partisan positions: ideological and historical-cultural. The ideological hypothesis postulates that the position of the party towards the Common Foreign and Security Policy of the European Union will be defined by the political family it belongs to (e.g. socialists, conservatives etc.). The historical-cultural hypothesis is based on an assumption that political culture that was formed in the country throughout its historical development will have a great impact on the party positioning, especially on the realm of foreign and security policy. Both of the hypotheses partly provide explanation for the stance of parties. However, none of these hypotheses is able to produce complete explanation, leaving significant loopholes. Therefore, an attempt is made to combine them and present a joint approach that is able to explain why differences and similarities in parties' positions towards the Common Foreign and Security Policy of the European Union occur. Finally, it is possible to argue that particular historical experience (and its interpretation) can be strong enough to drive positions of the major parties closer to each other and even forge consensus on particular issues of foreign policy.

Key words: European Union; political parties; Common Foreign and Security Policy.

P. 110. *Mukaeva Larisa N.* Tomsk State University. **FROM INVESTIGATION HISTORY OF GORNY ALTAI BY P.A. CHIHACHEV IN 1842.** The article reveals a significant event in the history of investigation of Gorny Altai in pre-Soviet time – the geological expedition of a Russian scientist P.A. Chihachev in 1842. The work analyses the aim and tasks of the scientific expedition, which had no analogue either before or after 1842. The Ministry of Finance entrusted the outstanding scientist who had European recognition with the investigation of all the south-eastern part of the Altai region, which was not investigated because of its remoteness from the main mining centres of Zmeinogorsk and Salair districts, and because it was uninhabited and hard to reach as well. The Finance Department, which rented the entire Altai mountain district, thought it to be important to hold general geological investigation of ore wealth in that part of Altai. The department intended to find out the prospects of industrial development of stream and ore gold and other ore resources in South-Eastern Altai. Another aim of the scientist was exploration of the region bordering with the Chinese Empire and detection of river heads of the main rivers of South-Eastern Altai: the Chuya and the Chulyshman. The work describes in detail the route of the scientific expedition. While investigating the geological structure of the banks of the Sema, the Ursul, the Katun, the Chuya, the Chulyshman and their inflows, the scientist compiled the pictures of rocks, which he studied during the expedition. P.A. Chihachev pointed out three goldfields, which he found in the course of his journey, they are the basins of the Sema, the Ursul and the Chuya. Along the Chulyshman inflow – the Kairu – he investigated an iron-ore deposit and came to a conclusion that the deposit was promising for industrial development despite its remoteness and inaccessibility. He found demonstrations of brown iron in other regions of Gorny Altai. The work underlines the significance of Chihachev's geological discoveries in Gorny Altai. In some places the scientist found cinnabar and almost one hundred years later following the tracks of Chihachev's expedition the Soviet scientists found large deposits of mercury. The scientist paid attention to the displays of non-metallic rocks and minerals. Afterwards in the last third of the 19th century the scientists conducted searches of asbestos for its industrial mining. When conducting prospecting works P.A. Chihachev used well boring. The significance of the investigation in 1834 is in the fact that besides clarification of the geological picture of Gorny Altai P.A. Chihachev studied the hydrology, described the flora and fauna of the district, he also discovered the river heads of the Chuya and the Chulyshman and the phenomenon of permafrost in South-Eastern Altai. Chihachev left many valuable recommendations and suggestions concerning the economic use of natural resources of Gorny Altai.

Key words: Gorny Altai; P.A. Chihachev; expedition.

P. 117. *Mukhin Oleg N.* Tomsk State University. **GENDER IMAGE OF PETER I IN CONTEXT OF THE ERA.** Peter I is known for his deviant behaviour in his private life. Condemnation of the contemporaries and descendants was caused by his divorce with his first wife Eudocia, by marrying a woman of a very low origin, the future Empress Catherine I, by his numerous extra-marital sexual relations. Cross-cultural analysis allows us to better understand the extent of the typical or non-standard behaviour of Peter. Marriages of European monarchs were generally concluded for political reasons and did not anticipate the availability of emotional intimacy between spouses (although in some cases they may have occurred). Russian tsars chose their wives from a fairly large number of candidates, not always aristocratic; that is the emotional factor here could play a greater role than in Europe. This difference is reflected, in particular, in the private life of Peter I. Firstly, the lack of the principle of equal marriage facilitates the possibility of divorce for the Russian monarch (any European queen had support of her ruling clan), and, second, the second marriage of Peter is not so surprising, based on sincere

love and affection. Of course, the social status of the new queen – a captive and a laundress – in Russia was out of the ordinary, too. It can be explained on the basis of understanding of the specific identity of the tsar-reformer; being neurotic, Peter literally took Catherine from rags to riches, so to assert himself in his status as the demiurge of the new Russia (after all, for his family – nieces and son – he chose spouses of the European princely houses). The abundance of mistresses in Peter's life was not uncommon in the Russian tradition (of course, this does not apply to the tsar family) and in European courts (where the presence of a mistress was almost a mandatory attribute of the royal status, indicating, in understanding of the subjects, health and welfare of the ruler). There are suspicions about homosexual contacts of the tsar-reformer, reflected in a variety of sources, though not conclusive. As the analysis of archival sources shows, people's condemnation of "obscene" behaviour of Peter I does not appear so often (much less frequently than the rejection of his political and cultural innovations). Attempts can be found even to justify the tsar with reference to the negative influence of foreigners, or, as in European countries, the need to maintain the function of prosperity and fertility. In general, we can say that the concept of "normal" and "abnormal" in the private sphere in Peter's epoch reflected the transitional nature of the period. Unlike Western countries, where standards of morality experienced the greatest period of loosening at the Renaissance and early modern times, while in the 18th century they gradually entered a more civilized (in the sense of N. Elias) framework, Russia at this time entered the space of liberation and experimentation, repeating the whole Western way with some delay. Hence are a few stronger reactions of subjects and descendants to the behaviour of the first emperor.

Key words: monarchy; gender; process of civilization.

P. 125. *Openko Yevgeniya V.* Tomsk State University. **CLANDESTINE ORGANISATION. US FOREIGN POLICY TOWARDS EUROPEAN INTEGRATION IN LATE 1950S.** The core principle of the US post-war foreign strategy was based on the concept of "global vision" and the desire to build the world order based on the principles of liberal economy, along the lines of American capitalism. European integration was the key element in post-war American foreign policy and during its initial stage US influence on its development was considerable. Their aim was to implement the federalist American model in Europe, as they believed that a strong integrated Europe would be more efficient and rational and would help contain the Soviet Union and tie Germany into the federal European structures and future problems with this country would be prevented. In the 1950s issues of mutual security and strive to decrease spending on American troops dislocated in Europe were of higher importance for Eisenhower's administration. Eisenhower encouraged economic integration, considering it an instrument for strengthening political and military cooperation between Western European states and bolstering their independence in defence issues. On the whole, the 1950s were characterised by America's strong support for the European integration process. However, the political situation and the factors, which defined US foreign policy, were different at the beginning of the 1950s when the ECSC was created and in the mid 1950s when the EEC and Euratom were established, as was the quality of the support. At the same time, by the end of the 1950s the actual participating countries began changing their attitude towards European integration. After the creation of the ECSC, the nature of the integration process became more independent; the EEC and Euratom were presented as "autonomous" European projects, serving, first and foremost, the interests of Western Europe. In these conditions during the mid 1950s the main work on promoting European integration was undertaken unofficially 'behind the scenes' through covert operations of the Central Intelligence Agency and American foundations such as Ford and Rockefeller foundations. The funding of the European Movement was one of the most interesting US covert operations in post-war Europe. The conduit for American assistance was the American Committee on United Europe (ACUE), directed by senior figures from the American intelligence community. Many Americans working for ACUE either were themselves determined federalists with an interest in the United Nations or else viewed American federalism as an ideal political model, which could be deployed elsewhere. As for the foundations, their position was determined by their leaders' strong belief that they should set aside resources in Europe for the "cultural war" against the Soviet Union. In the mid 1950s the foundations began to spend a great deal of money on bringing American and European intellectuals together to discuss solutions to European problems.

Key words: European integration; Eisenhower's administration; post-war world order; covert operations.

P. 129. *Stagis Ivan K.* Novosibirsk State Pedagogical University. **NATIONAL QUESTION DISCUSSION IN THE BOLSHEVIK PARTY BY EXAMPLE OF I.V. STALIN'S MARXISM AND THE NATIONAL QUESTION.** In his research I. Stagis, basing on the analysis of the political situation in Russia in the beginning of the 20th century and after studying the Bolshevik Party program document on the national issue, tries to find answers to the question: what the reasons for the creation of this document were. The research carried out shows that Stalin, while not questioning the thesis of damage of nationalism for the socialist movement, tries to overcome Bolsheviks' critical attitude to nations. The analysis of the documents shows that it is built on two concepts of the Bolsheviks' national policy: the negation of nationalism and the principle of ignoring the national Synopsis. Stalin believed confronting nationalism is not the right but the duty of every Bolshevik. First, nationalism divides a single working-class movement, which, of course, harms the social-democratic party whose future depends on the success of this movement. Second, Russian nationalism at that time becomes a firm part of the ideology of the main opponents of the Bolsheviks – the Black Hundreds. Finally, nationalism is contrary to the program of the Social Democratic Party, which was very important in the confrontation between the Bolsheviks and the Mensheviks, which waged a struggle for the right to represent the interests of all social democracy of the Russian Empire. Based on these factors, the Bolsheviks had to agree with Stalin and recognize the struggle against nationalism as their direct responsibility. However, the changing socio-political situation required the development of a strategy rather than a simple denial of the objectivity of the nation as a form of ethnic organization. The main purpose of Stalin's work *Marxism and the National Question* was to attract the attention of the Social Democrats – the Bolsheviks – to the problems associated with the nation, the rationale for the study of the national question. Citing examples, widely reflected in the Bolshevik press, he drew attention to the changing socio-political context, showing how nationalism is destroying the basic values of the Bolsheviks, first of all – the unity of the socialist movement. Creating a positive image of social democracy as the only force that can deal with nationalism, can overcome the possible pessimism. At the same time the structure of the preface does not make it clear what the theory of the nation, Stalin's proposal, will be. Only one thing is clear – it will be built on the controversy with the concept of national-cultural autonomy, popular among social democrats of the Russian Empire. This fact itself further contributed to the transformation of *Marxism and the National Question* into the fundamental work on this issue.

Key words: national policy; Bolsheviks; nation; nationalism; Marxism.

P. 133. *Shichanina Yulia V.* Tomsk Local History Museum. **FOUNDATION AND CHANGE OF THE NEW VASYUGAN STATUS IN 1933 –END OF 1960s.** The article tells about the history of a small village called New Vasyugan. It is situated in the north part of

Tomsk region. Its history goes almost 80 years back. The history of New Vasyugan is an example of what the history of a Soviet village is. The settlement began to form during the period of mass repressions. The village became a district centre after 6 years since the commandant's office appeared there. This event gave a considerable impetus to further development of the village. There was an administrative establishment, organizations at the district level and small production companies in New Vasyugan. Such problems as long distances from the district and provincial centres and lack of roads held back the development of the settlement. The settlement's economy was planned in a way to provide for the needs of its people. For example, a commercial collective farm called Krasny Sibiryak (the Red Siberian) was formed. The company's employees were engaged in sewing clothes and felt boots, making furniture, etc. The company used only local raw materials. New Vasyugan economy at that time was represented by small industries, which had the same value for the life of the village. In the early 1950s special settlers were exempt from the commandant's office and began to leave the Siberian site. The desolation of Vasyugan region and depriving New Vasyugan of the status of the district centre was a threat to further existence of the village. The climatic conditions of this area were never attractive for living and farming. The lands developed by special settlers could once be overgrown with grass again. However, in late 1950s the formation of oil and gas industry began in Siberia, and New Vasyugan oil exploration was formed. Geologists and people who wished to work in the oil industry in Siberia began to arrive in the village. This organization began to play the leading role not only in the economy of the village, but also in its social and cultural life.

Key words: New Vasyugan; Vasyugan region; district centre; Western Oil and Gas expedition.

LAW

P. 136. *Azarov Vladimir A., Boyarskaya Aleksandra V.* F.M. Dostoevsky Omsk State University. **SIMPLIFIED COURT PROCEEDINGS IN CRIMINAL PROCEEDINGS IN RUSSIA AND THE SPECIFICITY OF THEIR PROCEDURAL FORM.**

In the article the authors examine the concept of simplified court proceedings, the definition of which is built by identifying the specific features inherent in this "elementary" type of court proceedings in criminal cases. Features simplifying judicial proceedings are identified in comparison with the total order of procedure of the criminal proceedings and considered from the standpoint of how they form. In this case, the specific procedure of simplified court proceedings is examined from different points of view, bearing in mind the aspect of the criminal process: the system of procedural forms, the system of procedural safeguards or procedural relations. As a result, the authors formulate the definition of a simplified judicial process, which is understood as a more elementary, as compared to the general procedure of the criminal proceedings, judicial cycle of evidential activity, which is simplified, depending on the aspect of criminal justice: – by eliminating all unnecessary formalities in its procedure and by changing the form of procedural safeguards, including relating to the proof, when criminal justice is considered as a system of safeguards to achieve its objectives; – direct or indirect ways through the conversion of general or specialized rules of law, respectively, including attributable to the law of evidence, when criminal justice is considered as a system of rules of criminal procedure; – by eliminating certain elements of criminal procedural forms, also relating to the proof, by establishing shorter procedural terms, by entering additional elements in the system of criminal procedural forms that are adapted for a particular procedure, when criminal justice is understood as a system of procedural forms; – by changing elements of criminal procedural relations, including the relation in the sphere of proof, when criminal justice is considered as a system of criminal procedural relations. In addition, the authors of the article try to build the system of simplified court proceedings typical for the modern criminal trial in Russia, which includes a special order of proceedings, a special procedure for trial when concluding the pre-trial agreement on cooperation and criminal proceedings of private accusation.

Key words: simplified procedure; simplified judicial proceedings; criminal procedural form; differentiation of criminal proceedings.

P. 142. *Sviridov Mikhail K.* Tomsk State University. **ESTABLISHMENT OF THE TRUTH IN THE COURSE OF TRIAL.** For a valid adjudication in a case, the court is to establish the objective truth based on the examination of available evidence. According to the adversarial ideology of the Criminal Procedure Code of the Russian Federation, it is the parties' responsibility – defence and prosecution – to present evidence in court. However, the position of the court determined by the Criminal Procedure Code is not complete and, therefore, results in some difficulties when resolving a situation. If one of the parties (more often – prosecution) does not present all the evidence, the court cannot make up for the missing one for sentencing as all the means necessary for it are not provided by law. Having analysed all opinions given in legal literature we suggest the following way out of the problem situation mentioned above. It is hardly possible to tend to establish a classical complete model of an adversarial procedure under the present conditions in Russia. A court cannot act as an arbitrator only. It should, as a subject being solely responsible for the content of the sentence, influence the formation of the evidential basis, but should not be fully dependant on the parties to the trial. It is necessary for the court to increase its activity in making up for evidence but not to lose its impartiality. The latter can be achieved by keeping away from the interests of the parties (Article 15 of the Criminal Procedure Code of the Russian Federation). That is why it is inadmissible for the court to gather evidence itself acting side by side with parties and by this fact be involved in their interests. The activity of the court should not be aimed at gathering on its own but at making the parties find the missing ones. It is possible to achieve it by granting the right to return a case for additional investigation to the court. This right of the court should not coincide with its duty to gather evidence on its own (as it was under the Criminal Procedure Code of the RSFSR in 1960). And if we assume the possibility of gathering evidence by the court itself this can be done with the only purpose – to check the evidence presented by the parties.

Key words: court; truth; evidence; trial.

ECONOMICS

P. 148. *Iutina Marina M.* All Russian Research Geological Oil Institute. **APPLICATION OF GEOLOGY-ECONOMIC INDICATORS FOR FORMATION OF LISTS OF SITES OF SUBSOILS AS PROSPECTIVELY OIL AND GAS-BEARING OFFERED AS PROVIDED FOR USE (BY EXAMPLE OF TOMSK REGION).** Investors' interest in minimization of risk of inefficient financial investments predetermines the necessity of careful estimation of expediency of acquisition of licenses. One of the basic criteria of estimation of the efficiency of activity of the Federal Agency on Subsoil Use and its territorial bodies is the relation of quantity of the auctions and competitions conducted to the quantity of the objects which are subject to distribution on the competitive (auction) basis, provided and confirmed by the list. The necessity of preparation of offers for making amendments to the Methodological

recommendations on the order of formation of lists of objects offered for use, is caused by the need of search of balance of interests of the state and the investor. The major criterion of efficiency of realization of licensing programs is the parity of expenses and results, i.e. the site, being “an elementary particle” of subsoil licensing programs, first of all, is considered as an investment project. In this connection, the potential investment appeal of the site should be estimated before the object enters the list. It is necessary to make conclusions about the investment appeal of the site not only on the basis of geology-economic estimation of the object, but also taking into account the current potential possibilities of the investor. Geological information and the condition of research of objects offered for distribution with potential resources are poor, which makes trustworthy geology-economic estimation of the site practically impossible. However, in the world practice there are a number of indicators for express estimations of behaviour of the company when choosing objects for carrying out exploration work taking into account current economic conditions. The most common methods define the sizes of reserves of the minimum-profitable deposit: the estimation of its minimum-profitable extracted resources by the cash stream; the estimation of its minimum-profitable extracted resources by the profitability index; the estimation of its minimum-profitable extracted resources by the maximum discounted rate, etc. Formation of the list of the objects offered for distribution is one of the major stages of realization of licensing programs. The analysis of results of realization of licensing programs in subjects of the Russian Federation proves the necessity of making amendments to the Methodological recommendations on the order of formation of lists of objects offered for use, regarding the preliminary geology-economic estimation of a site. Application of express estimation based on the statistical analysis of the activity of extracting companies in certain subjects allows predicting the position of investors when choosing the object for exploration work taking into account current economic conditions.

Key words: geology-economic indicators; a mineral-raw-material base; licensing of a site of bowels.

P. 152. *Prodanova Natalia A., Kazakov Vladimir V.* Plekhanov Russian Academy of Economics (Moscow), Tomsk State University. **SUSTAINABLE DEVELOPMENT MANAGEMENT CONCEPTS OF REGIONAL SOCIAL, NATURAL AND ECONOMIC SYSTEMS.** Study patterns of regional socio-environmental management systems cover a range of issues including economic, social and environmental priorities and paradigms that influence the different trajectories of this development. Despite a large number of studies in the field, a clear ruling on describing data relations and the extent of the effects of the subsystems on each other does not exist. In the article the research models analysis of various aspects of the development of socio-environmental management systems has shown that such models cannot reflect a complete picture of the unfolding events in their processes; and solving environmental problems cannot be only in the context of environmental-economic relations. The study of regularities of sustainable development should rely on a more in-depth analysis of the causal relations between indicators and parameters of economic, environmental and social sub-systems, parts of the regional social, environmental and economic system. In modern conditions the development trends of regional social, environmental management systems do not leave issues confined to the field of economics, separate from the social and environmental spheres. To some extent, environmental and social priorities (contradictions or restrictions) are not restrictions essentially; they constitute additional criteria (or conditions) of transition to a new qualitative level of development (economic, technological, cultural, etc.) of human civilization. The regional level of sustainable development control plays a particular role, in particular, regional environmental management, the implementation of which is the essence of existence and functioning of regional socio-environmental management systems. The article provides an approach to the study of these relations when the interaction of socio-environmental management systems shows as relations and contradictions where management tasks, e.g. in economic subsystems, do not have socially and environmentally acceptable solutions (or do not need them). The differences between individual subsystems can and should be considered as a task, the solution of which will lead to a new high-quality step in social development. In the global perspective the main trend will be the interaction of these subsystems, so that the scope of the common interest will expand, and, with the time, merge completely.

Key words: regional social, economic and natural system; sustainable development; control; links and contradictions.

P. 157. *Tsurikov Sergey V., Kochetkova Nataliya A.* Siberian Academy of Finance and Banking (Novosibirsk). **VALUATION OF INTELLECTUAL CAPITAL OF A UNIVERSITY IN THE FIELD OF CONSULTING ACTIVITIES (BY EXAMPLE OF SAFB).** Characteristics of the competitiveness of a university involves the valuation of intellectual capital. The absence of common methods in the approaches to the valuation of intellectual capital of a university in consulting activities is criticized. In this article, intellectual capital in the narrow sense refers to the organization's assets as a complex of knowledge of its staff, in the broadest sense as a set of all intangible assets of the organization, including those that are not the result of intellectual activity. The article considers evaluation of intellectual capital based on the information generated within the higher school for its specificity. In general, the model presented takes into account the economic benefits the higher school receives at present and will receive in the future from the intellectual and professional qualities of the staff due to investing in its employees. In the system of indicators, which has been worked out for assessing the intellectual capital of the university, there are key performance indicators based on economic profits, which, on the one hand, correlate with market valuation, and, on the other hand, can be used in operational management of the organization. The fore-mentioned approaches to the evaluation of intellectual capital can be implemented in commercial organizations, which universities do not belong to. However, at present, the reform of the educational system of Russia considers different ways of business development. The article describes the valuation of intellectual capital of SAFB in consulting activities. The indicators, such as teaching staff payroll; turnover and costs of teaching staff competency improvement per unit, are part of the system performance of integrated assessment of intellectual capital of SAFB. “Index of Innovative Activity of the University” is considered as the index rate of innovation. The analysis showed a positive dynamics of the level of intellectual capital of SAFB, which corresponds to the integrated assessment of intellectual capital, based on the integral index. The tendency is natural, since in the academic year 2009-10 the innovation activity of the university, compared with the 2008-09 academic year, almost tripled. During this period, the university implemented actively the development strategy of SAFB as an innovative university on the basis of a balanced scorecard within the third phase of modernization of the multilevel educational system of the university. As it was mentioned above, the crisis of 2008 had a strong impact on the university's intellectual capital considering the market (customers) component. As a result, both valuation and the integral index decreased dramatically. Active response of the university to environmental changes in the form of developing and implementing marketing and innovation strategies stimulated the growing figures of the valuation of intellectual capital. This increase shows that the adequate strategy proved by scoring of intellectual capital on the basis of the scoring model.

Key words: valuation; intellectual capital; valuation of intellectual capital; consulting activities; university.

PSYCHOLOGY AND PEDAGOGICS

P. 161. *Bogdanova Elena L., Bogdanova Olga Y.* Tomsk State University. **DEVELOPMENTAL POTENTIAL OF COGNITIVE MAPS CONSTRUCTION METHOD IN HIGHER EDUCATION PRACTICE.** Current tendencies of developing the diagnostic follow-up of “developmental” education in higher education determine the relevance of researching the new educational constructs related to the value-meaning “re-building” of the consciousness of the participants of educational process (epistemological, ontological, goal-oriented and motivational beliefs). Adaptation of diagnostic instruments to educational environments, which allow “orientating” in the field of meanings and practical experience; revealing value-laden and goal oriented beliefs of students as related to the process and outcomes of educational activity in their interrelation and transformative influence on the success of reflection and construction of cognitive models of educational activity, is gaining significance. Following the logic of research, educational practice of constructing cognitive maps is considered as a prerequisite for and an integrative resource of implementation of the values of constructivist and cognitive approaches to education as an environment for cognitive development. Positioning cognitive map construction as a valuable resource of cognitive development is based on the idea that this practice allows integrating epistemological, ontological, anthropological and pragmatic foundations of educational process organization. Implementation of this method and analysis of the obtained empirical data makes it possible to contextualize and construct practice-informed and practice-oriented interpretation of the theoretical ideas presented in the foreign publications devoted to theoretical issues and applied researches on the method of cognitive map construction. During the research process it has been revealed that this method in its original framework is not completely adequate to the students’ zone of proximal development. There are two factors which determine the necessity of adaptation of this method: the low level of students’ reflection upon the means and outcomes of their educational activity; complexity of approaching the task of representation of subjective prognostic models of cognitive activity that implies identification of structural components, process attributes and establishment of correct interrelations between them. Implementation of the method of cognitive map construction has significant potential not only in facilitating the process of cognitive development of participants of educational activity, in promoting changes in motivational and goal-oriented beliefs and attitudes towards this activity, but also in triggering the development of educational practice itself as a socio-cognitive practice of sustainable human resource development.

Key words: cognitive map; diagnostic follow-up; cognitive resource; socio-cognitive practice.

P. 166. *Burzunova Yevgeniya A.* East Siberian State Education Academy (Irkutsk). **QUALITATIVE CHANGES OF GIFTED YOUTH PERSONALITY POTENTIAL IN INTENSIVE EDUCATION CONDITIONS.** Development of a gifted child potential is an issue of the day for educational psychology and pedagogics. Gifted children are able to obtain considerable results in different cognitive activities, but they have many difficulties in physical development, as well as in emotional and communicative spheres. In general it leads to disharmonious development, and may result in higher proneness to conflicts, seclusion and social maladjustment. Thus, it is reasonable to put gifted children into the high-risk group and provide them with special educational conditions. The present-day educational system is mainly focused on stirring up the cognitive level of psyche. Intensification of educational programs combined with specific complications of gifted children development may lead to an uncontrollable increase of school load, and have negative impact on the overall potential of the gifted child personality. With regards to the mentioned above, the purpose of our research is to define asthenia level of gifted children, who undergo intensive training in Irkutsk State University lyceum. The research also studies psychomotor, intellectual, emotional and communicative personality factors of gifted children, both asthenic and non-asthenic. The collected data show that more than 50% children are amenable to asthenia of different intensity. The gifted children with asthenia are characterized with the average level of communicative needs, smaller networks of contacts and, in general, greater slowness than gifted children without asthenia. We also observed correlations between asthenia and psychomotor, intellectual activity in this group. It may lead gifted children with asthenia to poor school results and lack of success. The more sociable, emotionally sensitive these children are, the lower their vegetative resources are. Gifted children, who do not have asthenia, on the contrary, tend to avoid emotional interaction and keep communication formal. Probably, it allows their psyche to work in the “energy-saving” mode and keep the optimum level of work capacity. But, chronic psycho-emotional effort creates hazard of modification of personality structure and reduces the potential of a gifted child.

Key words: personality potential; gifts; disharmonious development; intense education; asthenia.

P. 170. *Dmitrieva Tatiana V.* Eastern Federal University (Vladivostok). **MAKING MANAGERIAL DECISIONS IN THE PROCESS OF MASTERING MATHEMATICAL DISCIPLINES BY STUDENTS, AS A QUASI-PROFESSIONAL COMPETENCE.** The direction of the contemporary professional education development is oriented towards the realization of the competence-based approach to education. Each educational discipline has its specific competence-developing potential. Due to underdevelopment of the ideas of competence-oriented education in the pedagogical theory and practice, development, studying, implementation, measuring results of the education process targeted towards students’ mastering of necessary competences, turns into a complicated pedagogical problem. The primary task in the context of this problem is distinguishing and modelling competences that are impossible to master within particular disciplines. In this article the notion of a quasi-professional competence named “Development and making of quasi-managerial decisions applying elements of system analysis and mathematical modelling” is clarified. When structuring the content of the competence under research, the following components are sorted out: motivation related (demands, motives, aims, values, senses, value-sense orientation); cognitive (possession of theoretical knowledge of the matter of mathematical disciplines); operational (the skills of integrating theoretical knowledge from various disciplines and applying them for development and making of managerial decision); reflexive-effective (skills, experience as a premise and result of the competence formation); professionally important personality features propitious for the development and making effective decisions: reflexivity, independence, initiative, consciousness. The criteria of mastering the competence correspond to the components and can be concretised by a number of indicators. The indicators of the motivation-related criterion are the following: distinctive interest towards the result and process of decision development and making, determination, positive attitude towards quasi-professional activity, understanding the necessity and the value of scientific approach to decision grounding, desire to develop decision technologically in unnecessary situations, understanding the sense of quasi-professional activity, necessity to assign values and giving sense to objects of internal and external reality. The indicators of the cognitive component are the following: amount, durability, depth, flexibility, reproducibility, generalization, portability, efficacy, integrity of knowledge, as well as diversity and efficiency of methods of its presentation and assignation. The integrative indicator of the operational component is the adequacy of the results of activity (quasi-professional decision) to the cultural norms. Maturity of the reflexive-effective criterion becomes apparent in judgments, peculiarities of the process and the results of activity. Professionally important personality features are revealed and fixed in respec-

tive indicators of quasi-professional activity. The structural-content model of a competence is an information base for further research: projecting pedagogical conditions, building structural-layered model of development, and studying dynamics.

Key words: quasi-professional competence; components; criteria and indicators of formation.

P. 174. *Lomonosova Tatyana G.* Tomsk State University. **DYNAMICS OF MANAGEMENT POTENTIAL OF YOUNG PROFESSIONALS OF DEFENCE COMPANIES IN HUMANITARIAN ACME-ORIENTED TECHNOLOGIES.** The article presents the results of an experimental psychological research of young professionals' management potential in the conditions of the humanitarian acme-oriented technologies. For studying of the dynamics of management potential, an experimental psychological research was conducted in the following areas: 1) studying the dynamics of the management potential of young professionals control and experimental groups included in the humanitarian acme-oriented technologies, 2) comparison of the output indices of the management potential of young professionals experimental, control and management groups. Young professionals, graduates of Tomsk universities in 2007–2009 aged 23–30, were divided into 3 groups: experimental, control and management. The study was conducted based on assessment of the dynamics of the level of self-actualisation, vitally significant orientations, mental abilities and level of rigidity of the behaviour of young professionals. Our program of developing the management potential of young professionals represents a comprehensive acmeological project, which has a complex organizational structure. Basing on the research, the following conclusions can be drawn: 1. At the initial stage the experimental and control groups had a sufficient level of manifestation of indices according to all indicators. 2. Young professionals of the experimental group showed an increase of level of self-actualisation after the experiment; the level of rigidity was characterized by a decrease, the level of vitally significant orientation did not change and remained at high levels. Leadership qualities remained at high levels. 3. Young professionals of the control group showed a decrease in management potential after the experiment. 4. Experts of the management group had the optimum level of potential. 5. Specialists of the control group as compared to the management group had smaller values for manifestation of self-actualisation and leadership after the experiment. 6. The experimental group, after study developmental programs, showed the value closest to the data of the management group.

Key words: management potential; acmeology; humanitarian acme-oriented technologies; young professionals.

P. 178. *Sleptsova Tamara Ye., Kapilevich Leonid V.* Tomsk State University. **VARIANTS OF POWER ORIENTATED TRAINING PROCESS ORGANISATION FOR MATURE AGE MEN WITH REGARD TO MOTIVATION.** The nature of age-related changes of morphological and functional properties of the human motor system depends on the lifestyle, level and content of person's physical activity. Strength training, with its improving effect does not only affect the muscles, but also, to a greater or lesser degree, the entire body. The purpose of the study was the development and evaluation of fitness training techniques of power orientation for men of mature age, taking into account the motivation involved. The study involved 20 men aged from 24 to 38. They were divided into two groups based on targeting of the training process. The first group consisted of men wishing to reduce the percentage of body fat, the second – wishing to gain muscle mass. Two variants of the training process power orientation for men of mature age were used, taking into account the motivation involved. The first option was aimed at raising the power of endurance, as it is the greatest influence on weight loss involved. The training process was divided into three cycles. The training plan was to contain exercises included in the control tests. The number of basic exercises was 50% of the total. Time spent dealing with the load averaged 70%, rest time – 30%. In the first two months of training, the circle method was used. Exercises are performed one after another with a pause of 40 seconds of rest with a gradual decrease until its complete absence. The number of stations ranges from 9 to 12; the weight is 40–50% of the maximum. At the next stage the circle training was also carried out, but with the method of extensive interval work. The distribution of exercise in the complexes of the circle training changed. Instead of one big circle, the exercises were divided in pairs and were carried out alternately in 3 sets. The rest between exercises in sets is minimal; between the circles – 60 seconds. The workout was performed within standardized time and with a standardized number of repetitions (20 to 25); the weight increased gradually. At the final stage the stationary method was used – repetition exercises with additions to light weight (30 to 60% of the maximum) with the number of repetitions from 30 to 70. The second option was designed to increase muscle mass. The method of non-limited efforts was used. Depending on the weight, not reaching the maximum value, the strictly normalized number of repetitions (from 8 to 12) and approaches (3 to 5) is used. The rest period between sets ranged from 1.5 to 2.5 minutes depending on the active part of the body and the complexity of the exercise. The total time under load was 80% of the total training time. Despite the different directions of the applied methods, both groups engaged in positive dynamics of power indicators. In the first group, whose aim was to reduce weight due to the fat component loss, the change in the results is insignificant. Fairly strong growth is seen only in squats, because the power potential of the leg muscles is much higher than the capacity of the back muscles or chest muscles. In the second group, the training process that was designed to increase muscle mass, a strong growth in performance is seen in all exercises. Some trainees doubled the number of executed sets, indicating the efficiency of this technique. Most of the first group achieved weight loss through the fat component. In the second group this tendency is not observed. Most of them did not change their body weight, while some men, with a very low percentage of fat in the body, even recorded a slight weight increase. For such men it is also a positive factor in the impact of training loads. Thus, measured physical activity is an important factor in maintaining health of men of mature age, with the power exercises being one of the most promising forms of physical activity at this age. The structure and content of the developed techniques of power workouts were created with due attention to the prevailing motivations of the trainees – increase of power endurance, weight loss and shaping, increasing muscle mass and power capabilities. The effectiveness of the developed methods is confirmed by the predominance of effects related to individual motivations.

Key words: power training; men; variability.

P. 182. *Sukhovshin Aleksandr V., Meshcheryakova Emma I.* Tomsk State University. **PSYCHOLOGICAL AID POTENTIAL FOR BURNOUT PATIENTS WITH EXISTENTIAL PROBLEMS IN SANATORIUM CONDITIONS.** Phenomenological descriptions of emotional burnout associate it with the action of numerous emotiogenic (both objective and subjective) factors, causing growing frustration, worsening mood and well being, accumulation of fatigue, physiological parameters that characterize the intensity of work, leading to a professional crisis, depletion and burnout. A particularly serious threat to human health is the mental burnout syndrome with elements of existential (spiritual) crisis – the emergence of depression, feelings of helplessness and worthlessness of existence, low self-esteem of professional competence. Emotional burnout is a process of gradual loss of emotional, cognitive and physical energy, emotionally expressed in the symptoms of mental exhaustion, physical fatigue, and reduction of personal job satisfaction. The study sample was a group of 55 tourists in a sanatorium-resort complex “Belokurikha” (Altai region) of men and women (aged 47.5) of different professions (doctors, teachers, social workers) with a dysfunction of the psycho-emotional sphere, who made up an experimental (35 pers.)

and a control (20 pers.) groups. All of them had a psychological examination before and after a course of psycho-correction (3 weeks). With attention to the personal characteristics influence on the development of emotional burnout, student-centred methods were used to reduce occupational stress and treat emotional burnout. Psycho-diagnostic examination confirmed the different levels of emotional burnout, as well as the presence of elements of the spiritual, existential crisis in tourists. Rates of burnout correlated with personality traits – low emotional stability, shyness, suspicion and a tendency to guilt, impulsiveness, and frustration. The effectiveness of preventive action in public health, carried out in sanatorium conditions, due to the relevance of content and methods of prevention programs targeted culturally appropriate social groups. One of the first tasks of burnout psychotherapy becomes a quest for answers to existential questions, which, apart from their undoubted diagnostic value, can significantly advance the “burntouts” on the way to understanding and resolving their experiences.

Key words: resort; emotional burnout; psychological diagnostics; therapy; existential issues; training.

P. 190. *Usoltsev Boris P., Shanskov Mikhail A., Ponomarev Gennadiy N., Gorbunov Gennadiy D.* Baltic State Technical University “VOENMEKH” named after D.F. Ustinov (St.-Petersburg), Herzen Russian State Pedagogical University (St.-Petersburg).

APPLICATION OF PSYCHOLOGICAL CORRECTION IN THE COURSE OF FORMATION OF MANAGEMENT POTENTIAL OF HIGHER SCHOOL STUDENTS. Successful growth and development of any organization demands purposeful formation of professional potential of employees. The professional potential of the manager can be understood as a complete self-directed and self-developing system including resource possibilities of the manager. The management education system should form a professional class of managers possessing professionally important qualities. The psychological structure of the professionally important qualities of the manager is formed by the qualities defining the professional orientation of the leader, cogitative, organizing and communicative qualities. Thus, a rather wide range of important qualities defining management potential should be formed basically by the time of the higher school graduation. It should be the base for further professional growth of the manager. The psychological correction of the higher school students’ forming management potential can be made by using psychological training, sessions of psychological regulation directed at the activation of resource and creative possibilities. It allows not only acquiring knowledge and generating skills useful for life and professional work, but also providing the corresponding development and perfection of students. The purpose of the work was to research the application of psychological correction in the course of formation of higher school students’ management potential. The analysis of the literature and the results showed that at present some personal characteristics connected with effective communication, interaction with people, motivation for success, creation of teams and ability to work in them, art of negotiating and achievement of arrangements become the most significant factors for the manager. The positive dynamics of parameters of management potential we noted after a course of psychological correction points out possibilities of its purposeful formation in the course of higher school training. Application of psychological correction has allowed students to overcome the emotional and intellectual pressure from studying in a higher school more freely. The positive dynamics of interpersonal relations after a course of psychological correction allow recommending its application in the course of higher school training for students who major in organization management. The research of the application of a specifically developed course of psychological correction of the basic professionally important qualities for students specialising in sports management has convincingly shown its positive influence on such indicators as problem-solving skills, teamwork organization, self-management, clearness of purposes and ability to supervise. The positive influence of the psychological correction course has also affected harmonization of interpersonal relations, which, in turn, undoubtedly, has decreased the indicators characterizing chronic exhaustion.

Key words: management potential; psychological correction; students of higher schools; interpersonal dialogue; chronic exhaustion.

SCIENCES ABOUT EARTH

P. 195. *Vagina Yekaterina A.* National Research Tomsk Polytechnic University. **ISOTOPIC COMPOSITION OF SULFIDE SULFUR IN THE CHERTOVO KORYTO GOLDEN-ORE DEPOSIT (PATOMSKOE UPLANDS).** Ratios of stable isotopes of chemical elements can give information about the sources of ore and non-metallic substance of various mineral deposits. In this case the contradictions in the received results occur, which can change the idea of substance sources. In this context, it is necessary to involve new data on the study of sulfur isotopes with reference to new objects for the purpose of additional information accumulation. The isotopic composition of sulfide sulfur of the Chertovo Koryto gold deposit, situated in the early-Proterozoic black-shale Mikhailovskaya series was studied. The composition of sulfide sulfur in early (pyrite I) and late (galena) sulfides changes from +1.6‰ to +2.6‰ and from +1.8‰ to +2.5‰ correspondingly. The early pyrrhotite has a heavier isotopic composition – from +6.9‰ to +7.1‰. Sulfur isotope relations of sulfides are sustained during the whole mineralization process. It shows uniformity of the sulfur source during the mineralization process starting from the early complex and finishing in late sulfide crystallization in quartz veins. More positive sulfur isotope relations for pyrrhotite I (+6.9‰, +7.1‰) can possibly be explained by the mixture of juvenile sulfur with sulfur of sedimentary genesis. The composition of sulfide sulfur is close to the mantle marks. This fact correlates with the presence of contrasting anomalies of chalcophile elements P, Ti, Mg, Ca, Fe, Mn in beresites of the ore-bearing metasomatic halo. The mantle composition of sulfur also correlates with the presence of intramineralization dolerite dikes and with the proximity of the deep break. The received isotopic data are associated with the isotopic composition of sulfide sulfur in other gold deposits located in the black-shale series (Kedrovskoe, gold-sulphide ore deposits of eastern Kazakhstan) and in the crystal substratum (Irokindinskoe ore field). These facts supplement the list of the features that show that the metal-bearing fluids are generated in the mantle magma reservoirs. Thus, four facts are the proof of the magmatogene mineralization concept of the Chertovo Koryto deposit: 1. Isotope values of sulfur are changing in $\pm 5\%$ limits, which corresponds to the mantle source. 2. Presence of intra-ore basite dikes – fluid conductors. 3. Chalcophile elements contrast anomalies in beresites. 4. Deposit placement is controlled by the deep break.

Key words: isotopic; sulfur; sulfides; gold deposits; black-shale.

P. 199. *Yevseyeva Nina S., Romashova Tatiana V.* Tomsk State University. **DANGEROUS METEOROLOGICAL PHENOMENA AS A CONSTITUENT OF NATURAL RISK (BY EXAMPLE OF THE SOUTH OF TOMSK REGION).** The safety of humans and environment, the rate of their protection from the impact of technological, natural and social factors are an indispensable condition of the stable development of the society. Over thirty types of dangerous natural phenomena are revealed on the territory of Russia, but 50–70% of their total damage falls on dangerous weather. It has been established that in Russia, as well as worldwide, dangerous mete-

orological events (DE) are growing in number increasing annually by 6.3–7% on the average. The most frequently recurring DE are connected with stormy and hurricane winds (24.5%), very heavy precipitation (15.3%) and others. In Russia, the greatest number of DE is observed in the Siberian Federal Area including Tomsk Region. According to the research by Shakhramanyan et al. (1998), technological emergencies, inundations, fires are of greatest hazard to the population of the region. There are no data on analyses and records for other DE. The present paper considers two types of DE, i.e. heavy winds and rain showers creating dangerous situations – weather risks. The analysis of different data has proved that on the territory of the south of Tomsk Region the quantity of heavy wind cases increased by nearly 30% within recent 30–35 years. Heavy winds are often accompanied by blasts when the wind velocity reaches 30 m/sec (July 15, 1997). Heavy winds cause significant damage to the regional economy. Intense and continuous precipitation is one of the most harmful DE. The source of intense rainfall activity is formed above the territory of the Tomsk Region. Here, on the average, 46–51% of precipitation per summer falls in the form of rain showers (≥ 10 mm per twenty-four hours), and the number of days with showers varies from 6 to 13. As much as 80.5 mm of precipitation may fall during a rain shower (Tomsk, 1994). Showers, as well as incessant rains, promote the river level rise, the flooding of residential areas, and cause damage to the rural and municipal economy. Thus, the soil loss from the cropland may range 40–100 m²/hectare (1987). According to experts' estimation, in the middle of the 21st century, on the significant part of Russia's territory, the increase by 2–6% should be expected in cases of intense precipitation. Hence, the south of Tomsk Region is subjected to DE, among which heavy winds and shower rains cause the most significant damage. They often accompany each other (the so-called complex meteorological phenomena), thus strengthening the negative effect on all aspects of the human economic activity. The monitoring of these phenomena is gaining great significance in the conditions of the observed climate change.

Key words: dangerous weather events; showers; heavy winds.

P. 205. *Korzhnnev Viktor N. V.M. Shukshin* Altay State Academy of Education (Biysk). **ON CHANGE OF PSILOPHYTES AND PRIMOFILICES FLORA IN THE EMSIAN IN GORNY ALTAI.** At the mining of stratigraphy schemes of the Sarasinsky graben it is established that the first primofilices plants in the Altai territory appeared in the Early Emsian circle. The richest site of the fossil plants is located in the northeast of Basargino in 1 150 m below the mouth of the Cheremshanka on the right bank of the B. Kyrkyly River in the break of the Basargininskaya suite. Here A.R. Ananiev defined psilophytes *Psilophytites rectissimus* Höeg, *Protobarinophyton obrutschevii* Ananiev, *Psilophyton goldschmidti* Halle, *Zosterophyllum* cf. *myretonianum* Penhallow, cf. *Sciadophyton Laxa* Dawson., *Drepanophycus* sp. in Yu.S. Nadler's collection in 1973. Besides, *Minusia antiqua* Tschirkova, *Drepanophycus gaspianum* Dawson (Kräusel et Weyland), *Matarakia inopinata* Tschirkova were defined in V.N. Korzhnev's collection in 1972–1974. In addition from V.P. Udodov's collection of 1975, *Psilophyton arouatus* (Halle), *Rebuchchia mucronata* (Mägdefrau), *Protolepidodendron scharianum* Kräusel (Krejčí) Kr. Et W., *Jeniseiphyton rudnevae* (Perecvetov) Ananiev, *Gliptophyton granulare* Kryschtofovich, *Barrandeinopsis beliakovi* Kryshyt were singled out. This collection of fossil plants is stored in the Palaeontology Museum of Tomsk State University. The volcanic-sedimentary rocks of the Emsian contain: 1. *Protolepidodendron scharyanum* (Krejčí) Kr. et W. in Basargininskaya suite of the Sarasinsky graben, a very popular kind for the middle Devonian and *Gliptophyton granulare* Krichtofovich, known only from the middle Devonian. 2. *Cephalopteris* (?) *praecox* Hoeg typical for the middle Devonian in Ongudayskaya suite of the Ongudaysky graben defined by A.R. Ananiev from A.F. Belousov's collection in 1967. The same mixed vegetative complexes of the Emsky circle are known in other areas of the western part of the Altai-Sayansk folded area. The formation process of primofilices flora was not uniform. In the Emsian an intensive volcanic eruption occurred on a side of the Siberian Continent. In the western areas of the Altai territory volcanism was island-arc. In the eastern areas of the Altai territory within the Uimensko-Lebedskaya zone a marginal-continental rift was formed. The volcanism was accompanied by the formation of gold deposits, polymetals, uranium, which caused mutations of plants. Hydrogen, methane, oxide carbon, carbon dioxide, nitrogen, ammonia, chloride hydrogen, hydrogen sulfide, arsenic and boric acids, chlorides, fluorides of metals delivered by volcanoes in environment promoted occurrence of connections causing epigenetic variability of plants. The factor of natural selection played an important role caused by the change of the living conditions. Aridization promoted the disappearance of primofilices flora, whose separate representatives existed in the coastal zone of continents until the end of the middle Devonian. The possible area of occurrence of primofilices flora can be the coastal areas of the Siberian continent, in particular of the Altai territory.

Key words: Gorny Altai; Emsian; psilophytes and primofilices flora; correlation.

P. 212. *Lepokurova Olesya Ye., Ivanova Irina S.* Tomsk Division of Trofimuk Institute of Petroleum-Gas Geology and Geophysics of SB RAS, National Research Tomsk Polytechnic University. **GEOCHEMISTRY OF UNDERGROUND WATERS OF THE BAKCHAR IRON ORE DEPOSIT AREA (TOMSK REGION).** This article presents the results of studying the chemical composition of the Bakchar iron ore deposit area groundwater, located 200 km northwest of the city of Tomsk in poorly rendered habitable taiga swampy area. Groundwater is in five water-bearing horizons. Almost universally, it contains elevated and high concentrations of iron 30 mg/l, as well as manganese, organic matter; it is depleted of free O₂. The ground water from the surface of the first three water-bearing horizons (Q_{II tb} – P_{3 lt}, P_{3 nm}, P_{2-3 jur}) lies in the sand and gravel deposits with clay, loam and lignite layers. They are fresh (salinity from 0.4 to 0.7 g/l, an average of 0.6 g/l), neutral and alkaline (pH 6.8–7.8), hard (5–9.4 meq/l), hydrocarbonate calcium and calcium-magnesium. These waters are Fe-enriched up to 10 mg/l, the average of 4 mg/l, Mn-enriched up to 2 mg/l. The groundwater of the Upper Cretaceous deposits includes two water-bearing horizons confined to sandy-clay formations of the Gankovskaya (K_{2 gn}) and Ipatovskaya (K_{1-2 ip}) suites. The water of the Gankovskaya formation is fresh, with higher salinity (0.6–1.2 g/l). There is a shift of water from hydrocarbonate calcium to sodium bicarbonate. This causes the large variation in the values of hardness (from 0.3 to 9.6 meq/l). In comparison with the higher-lying waters, they have higher alkalinity (pH 6.8–8.6). The content of iron in the groundwater, on the contrary, decreases to 2.9 mg/l on the average, but it is still high. The thermodynamic calculations of equilibria in the water-rock system were made. It is shown that all the water is not in equilibrium with the primary water-bearing rocks minerals: feldspar, muscovite, biotite, garnet, pyroxene, hornblende, epidote, chlorite, and many others. However, the studied water is in equilibrium with montmorillonite, illite, kaolinite and other clays, and calcite and siderite. Therefore, under these conditions the minerals of the first group dissolve actively, especially pyroxene, epidote and hornblende, unstable under these conditions and, therefore, being the source of iron and other elements. Then, as a result of incongruent dissolution, secondary minerals form, connecting parts of Si, Al, Ca, Mg, Na, K and Fe. According to the accepted classification of S.L. Shvartsev, according to which waters are named by the composition of the elements that bind the crystal lattice of secondary minerals formed in this system, the groundwater of the Bakchar iron deposit is the siliceous calcium-iron geochemical type of water. It can form an association of secondary iron minerals observed in the sedimentary iron-ore deposits of the Bakchar type.

Key words: geochemistry of underground waters; water-rock system; Bakchar iron ore deposit.