

## SUMMARIES OF THE ARTICLES IN ENGLISH

## PHILOLOGY

P. 7. *Gafurova Maria N.* Ural State University (Yekaterinburg). **RECEPTION OF NOMINATION: ONOMASIOLOGICAL CONDITIONS AND COMMUNICANT'S STRATEGY.** Communication is one of the main types of linguistic activity. In order to research it we can use not only discursive but also nominative data. Such factors as structural correlation, functional relevance, the role of addressee in the creation of the sign and the potential of the nomination active reception, which provides distant communication, allow combining the research of both nomination and communication aiming at characterizing a linguistic personality. A person may not only be the factor of nomination or the recipient of information, but also an active participant engaged in interaction. In this case, the addressee of nomination as a linguistic personality is characterized from the communicative point of view. Firstly, a straight onomasiological experiment was carried out in order to determine the parameters of the communicative functionality of nominative units. It allowed us to obtain the necessary nomination array and facts regarding the process of the name's origin. Secondly, a reverse experiment directed from the name to the object, and questionnaires were realized. Due to it we were able to determine the recipient's assessment, its cause and nomination informative status. As a result of the study we have determined the characteristics defining nominative units' communicative potential. On the object-level it is the amount and kind of motivational features. Complex nominations based on visual characteristics are preferred. The degree of motivational feature indirectness: figurative nominations with rather short associative chains and precise object spheres are communicatively successful. The mode of image organization: nominations based on metonymy and relative signs are not successful from the point of view of reception. On the linguistic level it is the form: predicative nominations, precedent texts, proper names and object-unmotivated derivations are characterized negatively in this context. Initial semantics of lexeme: concrete nouns and nominations-hyponyms are the most acceptable. Addressee-communicant's strategy is elicited on the basis of the judgments characterizing proposed nominations, attitude to the onomasiological problem resolving and sets of factors which are important for the recipient. We describe four empirically identified approaches: objective and logical strategy in two variants, neutral and evaluative types; creative approach, when the stimulus materials are viewed through the prism of their own nominative activities; strategy of largely negative assessment of someone else's nomination while approving its own version. Thus, the onomasiological investigation does not only reveal the linguistic and cognitive parameters of nomination relevant for the reception, but also predicts reactions of different communication strategies representatives.

**Key words:** onomasiology; nomination; communication; experiment.

P. 11. *Gooseyn-Zade Irina A.* Tomsk State University. **METAPHORICAL IMAGES OF EMOTIONAL STATES IN THE RUSSIAN LINGUISTIC PICTURE OF THE WORLD: MOVEMENT AND IMPACT PATTERNS.** This article describes metaphors describing the emotional sphere of the person. Two groups of metaphorical models, the movement and impact ones, were examined. These groups are the most representative and embody the concepts of feelings and emotions as entities that are in constant interaction with the person. Metaphorical models are formed on the principle of the common source (CS) and the resulting values (RV) of predicates used to describe feelings and emotions. In the metaphorical model of motion the effects can be divided into two types (subject and object), which have a definite correlation. In metaphors of movement, matching the original images leads to the coincidence of the resulting situations described by metaphorical predicates, thus, the correlation can be classified as interchangeability or synonymy, whereas the relations of subject and object model of impact are antonymic. 1. *Metaphor of movement.* Metaphors of the subject type are characterized by a sense of how actors can move or be in some space (in this case a person can act as the movement landmark of the emotion or space in which it is). Metaphors of the object type make the emotion similar to the space where a person is or moves. For these types of spatial metaphors synonymous correlation is characteristic. Thus, the emergence of the emotional state is likened to penetration, approximation. Stopping showing feelings can be characterized by the predicate of moving away from any object. Potential lack of sense of motion, stop, being in space are also actualized in the subject and object spatial metaphors. The image of the vertical motion is present in both models, but it describes the distinct results of the situation. In this case, the correlation is observed at axiological grounds: in both models the considered metaphorical verbs of movement along the vertical axis preserve their archetypal associations, linking the top to the positive and the bottom to the negative start. 2. *Metaphor of impact.* Metaphorical description of emotional states by means of verbs with the meaning of physical impact is a fairly common way of conceptualizing emotions in the Russian linguistic picture of the world. Subjective effects of metaphors illustrate the idea of independence of emotions, their authority over the person, whereas the object argues the possibility of human control over emotional states. Thus, this study allows us to establish that within each of the two major groups of metaphorical models discussed in this paper, there is a definite correlation. Models of movement are characterized by the interchangeability of metaphors of the subject and the object types: in each model predicates with similar CS may describe the same resulting situation; in this case they differ only in the position of the subject and the object. Metaphors of impact are also used mostly the same set of predicates, but interchangeability in this case is impossible, since the subject-object parameters here are meaningful: the RV depends on who or what is the subject or the object.

**Key words:** metaphor; cognitive science; metaphorical pattern; feelings and emotions.

P. 15. *Klyoster Anna M.* Omsk State Technical University. **STRUCTURAL ANALYSIS OF PRIMORDIAL TERMS OF GERMAN TERMINOLOGY OF ENGINEERING PSYCHOLOGY.** The purpose of the given article is consideration of structural features, characteristic for primordial terms of German terminology of engineering psychology. The carried out structural analysis of the made sample has confirmed that the structure of terms of engineering psychology possesses characteristic features for all German scientific and technical terminology. In English and German there are terms similar in the morphological structure (simple, derivative or derivatives, complex or composites and abbreviated words or abbreviations), as results of similar ways of word-formation. The investigated terminology totals to 3512 terminological units from which we refer to 2284 as primordially German terms. The given group is presented by simple single-root terms, derivative or affixal terms (derivatives), compound terms or terminological composites, terminological combinations and abbreviations. The results of the conducted structural research of primordial terms of German terminology of en-

engineering psychology have shown that there are 5 structural types of terms in the analyzed material: 1. Simple single-root terms formed in the semantic way, i.e. by means of various kinds of change of values. The given terms are components of word combinations, compound words and serve as the centers of families of words (23 terminological units). 2. The investigated terminology is characterized by a wide use of abbreviations with an obvious domination of alphabetic abbreviations (91 terms). 3. Terminological word combinations are presented by two-component attributive word combinations which consist of the core, the head element expressed by a noun, and an attributive, defining component (571 terminological combinations). 4. Derivative terms are a group with 640 terminological units. During the research we revealed the most productive model of derivative terms in which the term-forming stem is combined simultaneously with a prefix and a suffix. 5. Complex terms include 959 units. The most widespread type of compound terms in the investigated terminology is two-component attributive composites. The given terms prevail in German terminology of engineering psychology. As a result, it is possible to draw following conclusions: 1) the structural analysis of primordial terms of engineering psychology has shown that the investigated terms are created by ways of word-formation traditional for the German language; 2) in German terminology of engineering psychology there are all types of morphological structure of words, characteristic for modern German language.

**Key words:** German terminology of engineering psychology; structural analysis; word-formation models.

P. 20. *Komissarova Olga V.* Tomsk Polytechnic University. **METAPHORIC IMAGES OF MAN IN RUSSIAN POETIC DISCOURSE (ON THE MATERIAL OF N.V. PAVLOVICH'S DICTIONARY OF POETIC IMAGES).** In the article the author examines metaphors by means of which the image of man is formed in Russian poetic discourse. The investigation is done within the bound of a cognitive-linguistic approach where metaphor is considered as a mode of thought but not as a means of thought decoration. This approach makes it possible to reveal how different fragments of reality are reflected in a corresponding linguoculture. Images of masculinity and femininity which form gender opposition are referred to as the culturally significant ones. Their ethnolinguistic peculiarity is also marked by conceptual metaphors. These images belong to cultural constructs and they keep evolving in historical perspective. The material for the investigation comprises metaphors from The Dictionary of Poetic Images by N.V. Pavlovich, whose direct nominative meanings serve as a basis for metaphoric transfer for man's nomination. The semantics of metaphors under study is connected with the interpretation of gender oppositions. There have been singled out the metaphoric models actualizing specific features which fix the stereotype of masculinity in the language. They are "Man is an animal", "Man is a bird", "Man is a tree", and "Man is a god or a mythological being". In the course of the analysis the following associative features uniting all the models have been distinguished: firstly, a heavily built man, physically strong, and usually tall; secondly, a brave, courageous, and bold man and, as a result, such characteristics allow to regard him as a defender of his family and motherland, and a valiant warrior; thirdly, a mighty man possessing power. It is necessary to mark out other essential features forming the masculine image of man in the Russian language. For instance, characteristics which represent mental abilities are found in the metaphoric models "Man is a bird" and "Man is a tree". While interpreting the image of man within the models "Man is an animal" and "Man is a bird" the association is based on the actualization of various ways of motion. Lexemes constituting the metaphoric models "Man is an animal", "Man is a bird" and "Man is a tree" reveal the specific characters of behaviour. Taking everything into consideration, the author concludes that the metaphoric models interact with each other producing an integral image of man. The analysis of the metaphoric contexts has shown that in most cases metaphors valueate man positively, which is, in general, typical of poetic discourse.

**Key words:** gender; masculinity; metaphoric model; occasional metaphor; poetic discourse.

P. 24. *Malyukova Darya S.* Tomsk Polytechnic University. **EXAMPLES OF MANIPULATION TACTICS USAGE IN MODERN MEDIA DISCOURSE.** This article reveals strategies, tactics and ways of social opinion manipulation, as well as it analyses ways of their realization in media discourse texts. Analysis of text material was implemented, speech means, realizing manipulation tactics were revealed. Possible principles of classification were suggested. Analysis of the text material, given in the article "East Hostages" allowed revealing various speech means, which realize different tactics of manipulation. The following lexical means of emphasis are used: means of semantic hyperbolization, degrees of comparison, relative pronouns, words with expressed emotional assessment, metaphors, clichés and stamps. Syntactical means, realizing the manipulative effect, are represented by passive constructions, order of the main sentence parts, correlating with the author's plan, using parentheses. Numerous usage of words with negative meaning, negative particles, metaphors, influencing fear is observed within realization of "analysis – minus". Abundance of parentheses expressing probability and possibility testifies that the author's reasoning and conclusions are based on conjectures rather than on factual information. Tactics of self presentation is marked with means of semantic hyperbolization usage. The author uses the following tactics of social opinion manipulation: "analysis – minus", "accusation", "exposure", "threat", "false associations", "appealing to an anonymous authority". Manipulation is realized through actualization of fear. One of the goals was to develop classification of strategies, tactics and ways of social opinion manipulation. The author concluded that classification can be implemented basing on what the object of manipulation is. Manipulation can be directed at logic or emotions of the manipulation victim. Bearing this in mind, tactics of "exposure" and "threat" influence emotions. Tactics of "analysis – minus", "accusation", "false associations", "appealing to anonymous authority", "self presentation" are directed at logic. The presented conclusions are considered as interim. It is necessary to analyze and define tactics, which were not presented in the given article. However, the present research states the diversity of manipulation tactics in contemporary media discourse and presents the speech means of their realization.

**Key words:** manipulation; strategy; tactics; speech means.

P. 28. *Orlova Olesya G.* Kemerovo State University. **DISCOURSE ANALYSIS OF REPORTS BY WALTER DURANTY ON THE SOVIET UNION.** The main idea of the paper is that a discourse is formed by different discursive models. Political journalism is viewed as a type of media discourse. A journalistic text is a central unit of linguistic analysis. A journalistic text is a type of texts in which the role of the author is extremely high. A series of media discourse analysis methods is discussed. Special discourse components of Duranty's reports make up a discursive model. The macrothematic structure is a category in discourse analysis which specifies a sub-discourse. Social effect is the final goal pursued by discourse agents. The macrotheme and the social effect (discursive categories) make a linguist categorize the reports under analysis as the Soviet geopolitical discourse. The specific characteristics of the soviet geopolitical discourse are viewed. Special discourse components of Duranty's reports such as historical context, ideology and values, discourse agents and clients, macrostructure and strategies are analyzed. So the thematic repertoire is determined by a subdiscourse (Soviet ideology and relation of the Soviets to the Western countries is the main theme) and is objectified by ideological lexis: *Stalinism, five year plan*, etc. Also this is a factor which determines the main strategy used by Duranty – contrast. But Duranty's goal is to transform the

stereotypes and to “defend” and “explain” the ideology he believes in and different notions connected with it, such as *collectivization*, *Marxism* and so on. So he uses other strategies – concession, correction. The most important information is put in the foreground of the text. The texts are highly repetitive. Metaphors, gradation, alliteration are the specific features of Duranty’s style: these methods help the author to accentuate his ideas. So we may conclude that the discursive model which the author chooses is the model of reality in his mind: he may choose and use such strategies which help him objectify it in his texts. Not only history changes our discourses. Author’s intentions and discursive choices are also the way stereotypes and images of discourses transform.

**Key words:** political journalism; media discourse; discourse categories.

P. 34. *Smirnov Yevgeniy A.* Linguistic University of Nizhny Novgorod. **MUSICAL ASPECTS OF JACK KEROUAC’S NOVEL ON THE ROAD.** One of the key markers of the so-called American “beat generation” culture was music, namely jazz and its avant-garde variation “bebop” which developed in the 1940s as a reaction to the popular and commercially-successful swing music. Jack Kerouac, considered as the most prominent author of the beat generation, being a big admirer of jazz music, though later referenced as a total exoteric to the world of professional jazz, utilized a modernist multicultural and syncretic approach when writing his most known novel *On the Road*. Bebop music and musicians are widely referenced in the novel, the key narrative points of the novel tend to be linked with different periods of bop development. Music as a sounding scheme in general is present on all levels of the novel – the narrative is consciously set to resemble jazz-poetry, sentences in the novel are set as what Kerouac called “breaths” in his manifesto on spontaneous prose or individual partitioned oral components separated by a unique kind of punctuation, the verbal structure of the novel is stylized as “bob-prosody”. In musical terms the plot structure of the novel appears syncopated, as the author describes his travels across the US and interjects vast dialogues with his companions with visions and set pieces on the tragic meaning of life and existence. The popular history of the creation of what the author and his critics called a “spontaneous” novel adds to the myth that *On the Road* is a work of complete improvisation created frantically in less than three weeks. However, studies in the diaries and letters of Kerouac reveal that the author extensively worked with drafts, revising his “improvised” lines copiously, creating what would later seem a perfectly “spontaneous” jazz-novel. Even the most known and quoted excerpts from the novel, which seem to be stream-of-consciousness-like examples of the author’s “spontaneous” style turn out to be parts of the author’s personal correspondence and earlier drafts. The metaphorical comparison of the author to a jazz musician, who adds his vast knowledge and skill to the improvisational approach and multicultural modernist stylistics drawn by one of the leading researchers in beat-culture, John Leland, is studied in the article. The true competence of the author who as per diaries and letters appeared to have very limited knowledge of how music is played is researched. At the end, author’s experiments with actual melodeclamation and the vast legacy of *On the Road* in music culture in forms of dedications and plots for musical pieces of different styles is shown.

**Key words:** beat culture; bebop; Kerouac; jazz-novel.

## PHILOSOPHY, SOCIAL AND POLITICAL SCIENCES

P. 36. *Bayova Yelena A., Bukovskaya Natalya V.* Tomsk State University. **GEORG SIMMEL’S SOCIAL THEORY HEURISTICS, OR HOW CONTEMPORARY SOCIETY IS POSSIBLE.** The article shows that the conception of a German sociologist Georg Simmel appears as positive heuristics, allowing organic overcoming the epistemological crisis for the contemporary social theory. The specificity of the conception of G. Simmel is the synthesis of Kant’s a priori method and philosophy of life, which is currently relevant for the analysis of contemporary social processes. Improvement of social theory is associated with its interconnection with the philosophical knowledge, which is the source of its renovation. The application to the classical social theory of Kant’s method for social problems analysis allowed showing the narrowness of the positivist paradigm. Ethos of sociology as one of the “cultural sciences” became focused on the systematic universality of knowledge, where diverse practical assessments assimilate a priori schemes with social and historical nature. In contemporary social theory such an approach is extremely vulnerable when classical scientific criteria face the authentic descriptions of the sphere of individual existence. Liberation and progressive enhancement of individual autonomy in a society leads to the liberalization of the classical concepts of “*Gemeinschaft*” and “*Gesellschaft*”. In the contemporary society, a new way of “*Vergesellschaftung*” is realized; whose interpretation according to contemporary social theorists should occur in terms of categorical changes in the relations of the individual and the society (A. Touraine, U. Beck, A. Giddens, N. Luhmann, etc.). This theoretical and methodological situation of “treatment of science for science” has led to a situation of radical negation of the classical intellectual heritage. The authors of the article see a way out of this crisis in the treatment of the heritage of Georg Simmel, who was the first in social theory to mark the problem of “*Gemeinschaft*” as the root cause of the dissolution of individuality in society. Simmel’s approach goes beyond the intelligible scheme in the interpretation of social reality and turns to an analysis of an individual life, its hermeneutical experience. Starting from the premises of Kant’s transcendentalism, in conjunction with the psychological approach, G. Simmel marked a new level of the theory of social cognition. Basic social process is the “*Vergesellschaftung*” that represent society as “coming into being”. In his concept of “*Vergesellschaftung*” Simmel emphasizes the genetic relationship between the social and psychological, where the individual, on the one hand, is a product of the society, on the other, - an independent individual existence. Primary are individual actions that affect cognition forms of a more general nature - the state, the family, the division of labor, etc. This approach is opposed to the essentialist interpretations of the society and is referred to as the “ontology of social coming into being”.

**Key words:** coming into being; a priori; *Vergesellschaftung*.

P. 41. *Bakhtiyarova Yelena Z., Chernikova Irina V.* Tomsk State University. **HISTORY OF SCIENCE AS BASIS FOR PHILOSOPHIC-METHODOLOGICAL MODELS DESIGN.** In the paper the analysis of science by the historic school representatives is covered. They see the task of the philosophy of science not only in revealing the cognitive factors determining the knowledge growth, but also in reconstruction of its actual history. Positivism examined the science in the static condition, beyond the socio-cultural context. Postpositivism strived to analyze the dynamics of the scientific knowledge; it reshaped the problem – the task of the philosophy of science is not in knowledge substantiation, but in historical reconstruction of its changes (the historical school representatives) and sociological analysis (sociology of science). Postpositivism assumes that the universal standard of scientific character is impossible to define; and scientific rationality is assigned not only as logic and correspondence rules abundance interpreting theoretical language to language observation, but is assigned with the cognitive activity system and with value-objective structures of the cognitive activity object. The program of the empirical substantiation of science was critically analyzed by postpositivism conceptions of philosophy and

methodology of science (Karl Popper, Imre Lakatos, Thomas Samuel Kuhn, Stephen Toulmin, Paul Karl Feyerabend and others). Despite the modern criticism of positivism the representatives of postpositivism shape two images of science: objectivistic (Karl Popper, Imre Lakatos, Stephen Toulmin) developing logic-rational analysis of science, and culturological (Thomas Samuel Kuhn, Paul Karl Feyerabend and others) realizing the socio-psychological approach, situational analysis and criticizing the methodologism program. The paper gives the basic ideas of Karl Popper's critical rationalism conception – falsificationism, conception of three worlds and conception of scientific knowledge objectivity. Thomas Samuel Kuhn's argumentation on the role of socio-psychological factors in scientific dynamics, his conception of the paradigm development of science, as well as the criticism of fundamentalism in the conception of Paul Karl Feyerabend's methodological anarchism are analyzed. The contribution of Imre Lakatos's research programs to the implementation of the science rational reconstruction strategy, development of Stephen Toulmin's scientific rationality conception is provided. Philosophy of science conceptions designed by representatives of history of science school did not only manifest the socio-cultural stipulation of science, but also fixed the limits for methodology as a system of universally binding rules of cognition that initiated the studies in the science of ontology, particularly, studying the mentality in cognitive science, fostered the development of new cognitive practices, such as evolutionary epistemology and social constructivism.

**Key words:** history of science; methodology of science; ontology of science; cognitive science; evolutionary epistemology.

P. 45. *Maierov Dmitriy N.* Tyumen State Oil and Gas University. **DIALOGUE OF RUSSIAN ORTHODOX CHURCH WITH REPRESENTATIVES OF RELIGIOUS WORLDVIEWS BY METHODS OF NATURAL THEOLOGY.** The Russian Orthodox Church (ROC) has traditionally performed interfaith dialogue with representatives of many religious worldviews. But the promising field of modern philosophical communication, namely the dialogue of worldviews, based on the methods of natural theology, widely used by philosophers and theologians since ancient times remains largely unexplored. The aim of this paper is an attempt to prove the following thesis: natural theology used by the Russian Orthodox Church in interreligious dialogue is a promising field for fruitful dialogue of religious world views with each other. Mainly interreligious dialogue is a testimony for Orthodox Christians of their Orthodox and heterodox Christians, non-Christian creeds. The purpose of the dialogue with non-Christian religions is two-fold: apologetic and polemical. 1. ROC maintains a dialogue with Catholics and Protestants, which should ideally facilitate the connection of Christians around the world. Fundamental aspects of interreligious ecumenical dialogue of Christians do not concern the substance of natural theology, equally present in these churches. Christians do not argue that God is the Creator and the Sustainer of the world, as it follows from the Holy Scriptures – the Bible, common for all Christians. 2. The analysis of the history of theological debate and dialogue between Christianity and Islam leaves a firm belief that in these meetings mostly natural theology was used. The conversation was conducted in the plane of the biblical history and biblical paradigms, but the very text of the Bible as an authority was not used, as the text is nothing for the Muslims. In such circumstances, the emphasis shifted to rational debate evidence, appeal to reason, everyday experience, to what is common to everyone, regardless of their religious beliefs. 3. Apologetic dialogue between Orthodoxy and Judaism is a truly sincere dialogue between religious worldviews, as the talk is about saving eternal souls of the companion. The dialogue is carried out on settling, rather than hiding one's beliefs. Methods of natural theology in these religions help to use it widely for its natural science and philosophical demonstration of God's creating this world. 4. In the dialogue of the ROC with unscriptural religions natural theology is primarily the dialog field, which even takes precedence over the value-meaningful dialogue based on the field of ethics of interpersonal and social communications. Natural theology in this case completes the missionary task, and the dialogue only benefits from that.

**Key words:** natural theology; ideological dialogue.

P. 47. *Malyshkin Yevgeniy V.* Saint-Petersburg State University. **ON DURATION OF THINKING IN THE PHILOSOPHY OF DESCARTES.** The article investigates the hypothesis of a weakened position of God in Descartes' project of philosophy. If God is the one who holds all things in being, including the thinking ones (*res cogitans*), then the weakening of His position calls into question the notion of duration (*duratio*), which Descartes did not define in details. We investigate this concept. If we accept the assertion of Descartes that God supports us from moment to moment (this produces duration), then two problems arise: 1) whom God's support is directed to: the thinking thing or the "complete" substance, i.e. the composite of body and mind; 2) if the support is still focused on the being of a thinking thing, then the latter can not be described in terms of time, because time is a measure of movement, but thinking is motionless; 3) if keeping in being is described in terms of power, or effort, then what it can be compared to? The answer to the first question is the consideration that as God's support is not tangible and does not depend on any finite subjects, then He supports us not as substances, but as *conservatum*. The second problem is clearly solved by the fact that we must interpret the moments not as moments of time, but as moments of duration; and the moment of duration is a force, which holds us in being. Therefore, the answer to the second question depends entirely on the solution of the third one. To answer it, we turn to the Cartesian construction "just a conceivable distinction", which indicates the possibility of perception of false beings. This "zero degree of objectivity" helps up to make a comparison with the force of holding in being. The phenomenon, which appears as a result of this analysis, namely, to focus attention on the things known to be false, plays a significant role in the structure of duration. The context in which particular importance of memory is detected is that it is a witness of insignificant being, which non-existent items obviously are. It is concluded that in the structure of Cartesian metaphysics memory plays an invisible, but crucial role.

**Key words:** duration; memory; demonstration of God's existence.

P. 53. *Khamrina Yuliya A.* Tomsk State University. **METHODS AND WAYS OF RITUALS TRANSFORMATION IN MODERN SOCIETY.** In this article the author reviews the main directions of rituals transformations in the modern society. To determine them we have turned to the characteristics of this kind of behaviour in the traditional society. The starting point to understand the processes of the analyzed phenomenon changing is discovering its main properties and functions in the traditional culture. Our hypothesis is that the modern processes of rituals transformation are connected with the changing of the main properties and functions of the traditional ritual. There are three directions of the ritual transformation in the modern society: 1) emergence of "new" rituals with "old" functionality; 2) emergence of rituals with additional functionality; 3) individualisation of rituals. 1. The emergence or rebirth of rituals with old functionality is related to the necessity of socially significant forms reproduction by a ritual act. Emergence of the social acknowledgement rituals is an example of this kind of transformations. This kind of ritual is the modification of the rite of initiation. The social acknowledgement ritual intends to develop and support the sense of the belonging to a group. The ritual has a regimented form and the keeping of this form is the guarantee of the subject's acknowledgement in a new social status. 2. The second tendency is connected with the emerging of consciously constructed rituals, e.g. political. The ideological function is the main function for them. They are performed

for a specific aim made by their creators. 3. The third tendency concerns the changing of the ritual behaviour on an individual level. In this case, the first of all changes is the form of ritual. It is beyond the regimented ritual by the traditions and customs, but it continues to preserve its symbolism and significant pragmatism. We have concluded that, firstly, the modern tendencies of ritual transformation, mainly, are connected with modifications of their properties. The mutations of their properties transform rituals into the behaviour that satisfies the modern way of living. Therefore, processes of ritual transformation are connected with their interrelation with social, political and cultural environments, which are, in turn, subjects to changing (migrations, grows, changing of authoritative relations, etc.). So, we affirm that rituals transformations are not only the consequences of social changes, but the indicators of them. Secondly, the outwardly regimented ritual behaviour is the subject to changes and there is no contradiction to the nature of this phenomenon. The ritual transformation occurs imperceptibly for its subjects, so changes in ritual itself are slightly visible and exist in the subjects' consciousnesses as constant, stereotypical, established behaviour patterns.

**Key words:** ritual; properties and functions of ritual; social acknowledgement ritual; political ritual; individual ritual.

## CULTUROLOGY

P. 58. *Basalayev Sergey N.* Kemerovo State University of Culture and Arts. **SPECIFICITY OF ACTOR'S EXISTENCE AT PRE-VERBAL STAGE COMMUNICATION.** The phenomenon of stage communication is considered and exposed to the analysis in this article. The comprehension of deep processes of stage communication, the analysis of the latent mechanisms of perception, interaction and processing of the information accumulated in the actor's psychotechnics is carried out. In the structure of stage communication the pre-verbal stage communication stratum is allocated, besides the verbal and nonverbal levels of interaction. This level is the base of actor's playing. Infection, suggestion, imitation and others are shown here. There is a direct exchange of mental non-articulated information between actors at this level of communication. Non-sign mental influence on consciousness of the partner which can be recoded in signs already known to the subject is carried out and revealed further at the non-verbal and verbal levels. Arising on the pre-verbal stage communication level the interaction system is established; it functions only in a concrete process and is void for other acts of communication. The information apprehended on the pre-verbal stage communication level is included into the sphere of implicit knowledge. Stage communication on the pre-verbal level differs in continuum because deep mental mechanisms of empathy (projection / introjection, identification, emotional resonance, penetration, etc.) activate the private world of the person, its inwardness, including the deep layers and structures of the psychical. In the given research acts of pre-verbal stage communication are considered during which the "overliminal" impulses penetrate the consciousness. The information from the sphere of the unconscious is comprehended. By means of emotional resonance as a mechanism of empathy leading to a resonance in the psychophysical system of the person, deep processes of one actor become perceived by his/her partner in stage communication. The meaning of the transferred and perceived messages is shown at the non-verbal level as acts, intonations, gestures, sights and definitively comes to light at the verbal level of communication in words and phrases. The associative-imagery strategy of information processing leads to generating the live, figurative, "here and now" system of sensual signs-symbols. The force of influence in the course of mental communications directly depends on the intensity of internal experiences of the actor and perception subtlety. The professional culture of the actor, his/her continuous internal work, and spiritual activity influence on the character of perception and interaction on the pre-verbal stage communication.

**Key words:** stage communication; pre-verbal stage communication; mental communications; actor's psychotechnics.

P. 61. *Sokhan Irina V.* Tomsk State University. **FEATURES OF RUSSIAN GASTRONOMIC CULTURE.** Architectonics of everyday practice includes the consumption of food as a fundamental structure. Gastronomic and culinary characteristics of a national culture help to understand the national character and its features. In the national style food found the borders, according to which the ethnic identity is constituted; there are strategies for things pleasant or unpleasant, tasty or tasteless, one's own or strange. For example, the prevalence of the boiled in the national food culture may indicate the priority of home (in-house, regular) meals, while fried food actualizes the festive state, meals outside, changing the gender roles in the kitchen by increasing male participation in cooking. Gastronomic balance of the national cuisine is determined by the periodicity of the boiled / fried food as in-house / outside meals, everyday / festive food, as and the ritual meal, fast food and long term storage food. The Russian culinary history has developed through serious transformations, such as, for example, the powerful flow of foreign cuisine (mostly French) after the reforms of Peter I, or the totalitarian reconstruction of gastronomic culture in 1920-1930s. Following the classification proposed by a culinary historian V.V. Pokhlebkina the history of Russian cuisine can identify six stages: from ancient-Russian cuisine (9-16th centuries) till the Soviet cuisine (from 1917 to early 1990s.). The iconic products for the Russian people were porridge (porridge reflects the conciliatory principle of the Russian mentality) and bread (substantial food product; any other complex food has accidental character in comparison with it). In the era of Peter I and Catherine the Great, the Russian cuisine underwent a powerful foreign influence; the French cuisine had a special effect – it was manifested in the spread of new culinary techniques. The Russian gastronomic culture underwent a powerful transformation in the Soviet era, during the revolution of everyday life in the 1920-1930s. It acquired the character of deficit – had become a way to establish feed links between an individual and a totalitarian government. The post-Soviet state of the gastronomic culture is characterized by the gastronomic nostalgia, the spread of industrialized products, fast food, the introduction of various national dishes and products of other national cultures.

**Key words:** national gastronomic culture; cooking body of culture; national identity.

## HISTORY

P. 69. *Ivanova Natalya P.* Altai State University (Barnaul). **RUSSIAN HOLIDAYS AS DATING ELEMENTS IN CHRONICLES (BASED ON THE MATERIALS OF NOVGOROD CHRONICLES).** Up till now, scientists have been arguing about the time and circumstances of Russian Saints' canonization and about the status of Russian religious holidays (whether they have local or national veneration). Another contribution to the solution of this problem may be a research of the use of Russian holidays and commemorations in chronicles as dating elements. It is widely accepted that Russian chronicle-makers used "mesyatseslov" (book of saints with the church calendar) as a calendar to date historical events. Chronicles give a practical example of using mesyatseslov, which was constantly enriched with the lists of Russian Saints and religious holidays during the 11-20th centuries. Due to the chronicles you can learn what Saints were most hal-

lowed in Rus in different periods of time, when they became so widely known that their names were used as dating elements. The aim of the presented research is revealing and analysing Russian commemorations used by chronicle-makers as dating elements. The material of the research is Novgorod chronicles having the most ancient and the most complete tradition. Novgorod chronicles use the following commemorations: Orthodox Prince St. Gleb - September, 5; the Protecting Veil of the Mother of God - October, 1; St. George's Day - November, 26; the Death of St. Peter the Metropolitan of Moscow and all Rus - December, 21; the Translation of the Relics of Sts. Boris and Gleb - May, 2/July, 24; the Translation of the Venerable Relics of Our Holy Father, Nicholas, Wonderworker, from Myra to Bari - May, 9; Grand Prince St. Vladimir, Equal-to-the-Apols July, 15; the Feast of the Most Merciful and the Most Holy Mother of God - August, 1. During the research it was found out that the smallest number of Russian commemorations was preserved in the oldest chronicle list - the Sinodalni list of Novgorod first chronicle. There are only three commemorations there. The biggest number of references to Russian religious holidays and Saints are found in the Komissionni list of Novgorod first chronicle - 10 references. In Sofia first chronicle Russian commemorations act as dates seven times, in Novgorod fourth one - six. The most frequently used Russian holidays are the commemorations of the Boris and Gleb period (years 6740, 6759, 6767, 6855/56). They appear three times in Novgorod first chronicle, twice - in Sofia first chronicle and once in Novgorod fourth one. The mesyatseslov reference of the Sinodalni list of 1196/97 "on the George's Day, autumn, Prince Yaroslav", i.e. with the use of the name Yaroslav, confirms our hypothesis of using the church calendar (Prologues) while writing Novgorod chronicles. The use of the commemoration in honour of the Translation of the Relics of St. Nicolas (May, 9) as a dating element in the Komissionni list at the beginning of the 13th century (year 6712) in describing Tsargrad capturing shows us an example of an earlier use of this commemoration in comparison with mesyatseslovs and church calendars (Prologues). That means that some prayer books of the earlier period where this commemoration was mentioned were not preserved. The use of two Studite commemorations in the article in 6748/49 (The 630 Fathers of the Chalcedon Council and Grand Prince St. Vladimir, who christened Russia) proves our earlier hypothesis of prayer books use of the Studite Rule of the 12th century namely in Novgorod chronicles. In the article the author comes to a conclusion that it was by the end of the 12th century when Russian Saints and holidays not only enlarged the lists of the Saints but also became firmly established and were used as dating elements in chronicles.

**Key words:** mesyatseslov; Russian holidays; chronicles.

P. 75. *Karatovskaya Vera V.* Tomsk State University. **THE NORMAN PROBLEM AND RUSSIAN BELLES-LETTRES.** The article is devoted to the changing of historical consciousness in modern Russian society on the basis of solving the Norman problem. The author tries to answer the question whether the Norman problem will be "the eternal question" for Russian social ideas or accumulated cultural potential will be an antidote to the creation of deconstructive historical myths. The author analyzes belles-lettres devoted to the establishment of the Old Russian State. The author of this article demonstrates how methods of solution of the Norman problem were metamorphosing in the length of time and what new elements every generation introduced in the interpretation of the Varangian Question. Ethnicity of the Varangians and the influence of the alien element on the establishment of the Old Russian State are the key points in the understanding of the Varangian Question, which were interpreted in different ways by writers at different stages of social and scientific thought. On the one hand, main achievements of historical studies adopted by writers are reflected in literary texts. On the other hand, some raw spots in dominant scientific conceptions are reflected in the belles-lettres too. Moreover, nationalism and political views (straightly or implicitly expressed) directly influence on the historical belles-lettres. In this connection opinions of writers on the Varangian Question is repeatedly revised. Like a pendulum motion, critical attitude to the Norman Theory and the denial of any foreign influences on the Slavic culture were changed by yet another concession of the Scandinavian contribution to the birth of the Old Russian statehood. The author of the article researches the reflection of the Norman problem in the Russian belles-lettres from the second half of the eighteenth century to the beginning of the twenty-first century and notices great disjuncture, which repeatedly appeared between professional historical knowledge and collective historical consciousness. However, the understanding of the Norman problem in Russian historical memory has greatly changed during the two-and-a-half centuries. The idea of the participation of the Vikings in the Slavic history of the ninth century has come to stay in collective historical consciousness. Thus, the analyzed aspect of cultural consciousness which dominates in belles sphere and which is topical for Russian present-day readers may indicate a steady tendency of formation of appropriate national consciousness in the contemporary Russian society.

**Key words:** myth; self-consciousness; nation; Northmen.

P. 79. *Kartashova Tatiana P.* Tomsk State University. **CHANGES OF THE FIRST SIBERIAN SCHOOL SOCIETY CHARTER AND THEIR REASONS.** Questions connected with the process of creation, approval and changes of the principal ideas in the chief document of public organization on the basis of which the society opened and developed its activity have been considered using the charter of the society. Created and confirmed in 1882 by a well known businessman P.I. Makushin, the charter was supplemented and changed. The goals and tasks, organizational and financial structure of the organization varied all the time. From the point of view of the goals, ways of the structure formation, management of the society and material resources creation, we can assert that it was the model of the charter of a charitable society. This charter became a sample for creation educational organizations in Siberia in the end of the 19th century. On the basis of the analysis of authorized documents it is possible to point out the following stages of life and activity of the society: 1. 1880s: the activity of the society is defined by the person of the chairman and his ability to involve sponsors and to cooperate with the authorities. The primary goals of the society are charitable. 2. 1890s: the basic role in the life of the society is played by Councils. Commissions help them and provide cultural-educational work. In the activity of the society the accent is displaced towards primary development, professional and out-of-school education. 3. The beginning of the 20th century: management decentralization, strengthening of the role of public meetings. The basic field of activity is cultural-educational work. The activity of government officials was directed at creation of a normal charter unified for all educational societies. Without allowing the expansion of the goals and tasks, the government made an attempt to limit the society structure, to implement intensified control over the activity of all its structures. The society tried to resist the introduction of restrictions. Members of the society refused to recognize and approve the amendments brought by the government and as an answer sent new petitions for expansion of the rights up till their closing in 1906.

**Key words:** cultural and educational society; charter; Siberia; Tomsk.

P. 83. *Kuzoro Kristina A.* Tomsk State University. **ORTHODOX PERIODICALS ON OLD BELIEF IN THE MIDDLE 19TH - BEGINNING 20TH CENTURIES.** The middle of the 19th - beginning of the 20th centuries was the time of comprehension by historical science and public thought that the Old Belief requires most attentive studying. Therefore the given period became the time of the most multilateral and detailed scientific research of the Old Belief. The leading part in distribution of scientific knowledge about the Old Belief

among readers belongs to ecclesiastic periodicals. The edition of church periodicals dates back to the first quarter of the 19th century. In 1821 the Metropolitan of St.-Petersburg and Novgorod Grigory (Postnikov) founded one of the spiritual journals, first in the country, – The Christian Reading, at St.-Petersburg Ecclesiastic Academy, thus starting official ecclesiastic journalism. Ecclesiastic journals, comprising both journalistic and art works, serious scientific researches, became an appreciable phenomenon in religious education in Russia. Well-known church figures occupied the posts of editors of orthodox journals at that time. The church periodical press was popular with the reading public. Therefore, it is very important to define the role, the place, the value and the specificity of church periodicals in the Old Belief research. In the list of the orthodox periodicals containing scientific researches of the church split, were journals of general orientation: The Theological Bulletin (Sergiev Posad), The Christian Reading (St.-Petersburg), The Church Bulletin (St.-Petersburg), The Wanderer (St.-Petersburg), The Ecclesiastic Reading (Moscow), The Instruction for Rural Pastors (Kiev); and those specialising directly on the split studying: The Brotherly Word (Moscow), The Orthodox Interlocutor (Kazan), The Orthodox Review (Moscow). Publishing materials on the split history, ecclesiastic journals kept the readers informed about modern events in the life of Old Believers; publication and distribution of proceedings of historians and theologians; some literary monuments of the Old Russian; spiritual poetry and prose. Missionary conversations with Old Believers, proceedings of Synod historians were published. Publishing houses of journals were engaged in the publication and distribution of books about the Old Belief. They were sent to ecclesiastic brotherhoods, consistories, private persons. The monuments of the Old Believers' book learning were also published. Thus, church journals, publishing proceedings of Synod researchers, making and printing lists of the new literature, being engaged in distribution of books, left an appreciable trace in distribution of scientific knowledge about the Old Belief, having transferred it from ecclesiastic academies directly to the reader. Orthodox periodicals left an outstanding trace in distribution of scientific knowledge, increase of cultural level of the reading audience.

**Key words:** Old Belief; Orthodox periodicals.

P. 86. *Razmolodin Maksim L.* Yaroslavl Region Administration of RF Federal Security Service. **ON CONSERVATIVE ESSENCE OF THE BLACK HUNDRED.** The rise of the Black-Hundred organizations (such as the Union of the Russian people, the Russian Monarchical Party, the Union of the Archangel Michael and others) on the political arena of Russia at the beginning of the 20th century was conditioned by the reaction of the traditional part of the population on the First Russian Revolution and Manifesto of October 17, 1905 to defend the basic values of the Russian civilization – Orthodoxy, autocracy, nationality. This gives grounds to determine the Black-Hundred to the conservative spectrum, because extreme-rights counteracted to the attempts of the liberal and revolutionary movements to undermine the absolute monarchy. The main cause of all-class participation in the activity of the Black Hundred organizations was the commonness of religious consciousness and traditional outlook. The most important characteristic feature of the Black Hundred was the adherence to the universal Christian tradition. In spite of plenty of programs of extreme right organizations, all of them had a single ideological basis – Orthodoxy, autocracy, nationality. It was a Russian conservative S.S. Uvarov who formed this principle in the 19th century. Uvarov's principle became the distillation of the conservative political philosophy which included religious and national constants. In the Black-Hundred ideology this formula got national content, because it displayed in mental and political spheres and reflected the absolute principle of the Russian being. The problem of identification of the Black-Hundred organizations as conservative ones can be solved by using S.S. Uvarov's principle "Orthodoxy, autocracy, nationality". The problem of identification to the Black-Hundred spectrum can be solved by the criterion of defense of the absolute Russian Orthodox monarchy. Using this criterion gives an opportunity to recognize Dubrovin's Union of Russian People as a model of the Black-Hundred organization and revise the views existent in historical science about the identity of the Black-Hundred and nationalist (including fascist) doctrine. Differences of ideological foundations conditioned sharp distinctions between the Black-Hundred and nationalist (including fascist) doctrines in the methods of attack of the principal political problems: state structure, national problem, conservation of the empire and proposals to reform the country.

**Key words:** Black Hundred; extreme right ideology; conservatism; traditionalism; basic values of Russian civilization.

P. 88. *Khaminov Dmitriy V.* Tomsk State University. **POLITICAL LIFE AND IDEOLOGICAL CAMPAIGNS AT THE DEPARTMENT OF HISTORY AND PHILOLOGY OF TOMSK UNIVERSITY IN 1940S–1950S.** The humanitarian education and humanities have always been the major component of the political and ideological processes occurring in the Soviet society. History, philology and philosophy made the sphere of the state ideology, which formed the person of the Soviet specialist (intellectual). Subsequently, according to the opinion of the authorities, he / she should become a support for the state in carrying out of an ideological policy during the professional work, including the pedagogical one. First of all, historical science and education as a specific segment of the higher school in the USSR solved these problems. For this reason state-party bodies made special demands in the field of ideology to the Department of History and Philology (DHF) of TSU in the first post-war decade. Serious ideological work, directed at strengthening of ideological and political views of the teachers and the students, considerably weakened after the war, especially concerning questions of foreign policy and mutual relations with Western countries, was done in the first post-war years at the DHF, in view of its specificity and special position in the system of ideological and political education of the population. In the second half of 1940s–1950s the faculty life and life of all the university was characterised by carrying out some ideological campaigns, which made certain impact on the general climate in professorial and students' environment of the DHF. During this period the life in all the USSR was marked by struggle against opposition and eradication of heterodoxy. First of all, it was shown in carrying out of such campaigns, as struggle against servility before the West and struggle against cosmopolitanism which, however, had specific features in the conditions of Siberia. Serious changes in political life of the DHF, especially in the student's environment, occurred after the well-known 20th Congress of the CPSU. However, in the second half of 1940s–1950s the DHF of TSU, owing to the remoteness from the country centre did not suffer considerably from the majority of ideological campaigns though some echoes did come to Tomsk. But these campaigns in TSU were not noted by large-scale reprisals and actions. They were limited only to the analysis of personal affairs at general meetings and some updating in the educational and scientific processes. To see the reason why the reprisals at the department during ideological campaigns did not reach the scope, it is necessary to understand that Tomsk was at a distance from capital cities, the behavior of administration and professorial and teaching staff of the DHF was wise, because they did not allow conflict situations to become aggravated, including the time after the 20th Congress.

**Key words:** TSU; political life; ideological campaigns.

P. 92. *Shevtsov Vyacheslav V.* Tomsk State University. **ACTIVITY OF COMMISSION FOR PROVINCIAL AND REGIONAL SHEETS EDITION RULES REVISION (1901).** In the beginning of the 20th century provincial and regional Sheets as a forming system of the regional governmental periodical press attracted the attention of the central authorities. The Commission for provincial sheets edition rules revision was created in 1901 at the Central Administrative Board on the Press. The basic purpose of the Commission was updating of

programs of sheets according to the new political conditions, their reduction to uniformity and establishment of information interaction both between the Sheets, and with The Governmental Bulletin. Programs of 73 provincial and regional Sheets were tabulated and showed a perfect variety in content, subscription price and periodicity. These newspapers initially created as a system of regional governmental editions, in the local conditions; and separate assumptions in the program and petitions of governors gradually departed from the ordered restrictions, developed and changed. A paradoxical situation happened – those Sheets which broke the program confirmed by the law, strengthened the informal part, filling it with forbidden headings (theatrical criticism, local chronicles, correspondence, feuilletons, etc.). Those Sheets deserved attention and approval by the Central Administrative Board on the Press, and Sheets following the legislative line were among outsiders. To understand the situation in April 9-19, 1901, the capital hosted a congress of editors of provincial governmental newspapers. The results of its work were generalized in a new edition of the newspaper's program. However, any changes in existing statutes about the program of provincial Sheets were not been made. The reasons of such a situation were in the general conservative course of the Nicholas's government, fear of any changes in the press position. Reform of the local governmental periodical press demanded financial investments from the authorities, and influenced on the developed financial relations between provincial Sheets and provincial boards, changed the existing schedule of states and salaries. There was a problem of selection of capable and ideologically reliable staff. Besides, hopes to influence the provincial private press in the interests of the government remained. The authorities could get an opponent and not the ally in the updated official bodies with the right to discuss governmental actions. As a result, the Commission activity had only information value and served for learning the position and needs of the local state editions.

**Key words:** provincial sheets; periodicals.

## LAW

P. 97. *Veltmander Aleksey T.* Tomsk State University. **METHODOLOGICAL BASIS FOR STUDY OF CONSEQUENCES EXCLUDING CRIMINALITY OF ACT.** Circumstances which exclude the social danger and criminal wrongfulness of acts are in fact an inter-disciplinary institution and reflect the features typical for a legal category common in relation to them – grounds to disclaim legal responsibility. When examining the circumstances, excluding the criminality of actions, we are to refer to different scientific approaches: consideration of separate conditions of circumstances, excluding the criminality of an act with and without their division into groups; consideration of components of the circumstance, excluding the criminality of an act; consideration of the ground of circumstance, excluding the criminality of act and an act, the criminality of which is excluded; consideration of a circumstance, excluding the criminality of an act in the form of an external factor; consideration of an act, the criminality of which is excluded. Each of the approaches mentioned above does not fully cover both the form and essence of circumstances, excluding the criminality of an act. It is hardly ever possible to state that circumstances, excluding the criminality of an act, constitute only an external factor, especially it is incorrect to reduce them to the act only. At the same time there are several legal facts in their structure, which only taken together allow us to speak about the lawful character of the situation on the whole. It is necessary to refer the following to the above mentioned legal facts: external factor (ground); condition of a circumstance, which excludes the criminality of an act; acts, the criminality of which is excluded. The mentioned legal facts lead to the isolation of a group of legal relations connected with the realization of some circumstance, excluding the criminality of act. The category of a legal situation reflects the peculiarities of a specified legal structure more completely. In criminal law understanding the situation of a circumstance, excluding the criminality of an act, represents a system of successive actions (omissions of acts) and events, consisting of an external factor, which causes the conditions for the commission of an act, the criminality of which is excluded as well as an act itself. Under the circumstances, excluding the criminality of an act, we understand a legal category provided for by the Criminal Code of the Russian Federation which reflects the conflict of social goods when one good is damaged for the sake of preserving another one. The given category consists of a ground (an external factor) and a condition which exclude the criminality and community danger of an act as well as an act which possesses all the characteristics of a *corpus delicti* and damages some criminally protected goods (interests).

**Key words:** methodology; lawful act; circumstances.

P. 100. *Knyazkov Aleksey S.* Tomsk State University. **ON CRIMINAL PROCEDURE AND FORENSIC UNDERSTANDING OF PURPOSES AND AIMS OF INVESTIGATORY ACTIONS.** Attention of scientists of criminal procedure and criminalistics to the category “purpose” and “aim” is determined by a circumstance that criminal procedure relates to such types of activity, for which it is actual to determine goal-setting. Correspondingly, the range of questions related to investigation of purposes and aims of searching and cognitive activity of investigating officer are the problems of purposes and aims of an investigative action as a form of realization of tactical-forensic means. Pressing questions of the forensic sciences are considered. Works of domestic and foreign researchers are broadly used. The analysis of different approaches of some criminalists to the understanding of purposes and aims of an investigatory action allows concluding that they are considered within the criminal procedure doctrine. The position, according to which tactical character of purposes and aims of a criminal action is emphasized, is viewed as more productive. At the same time, it is considered to be more precise to talk about forensic purposes of an investigative action. It is predetermined by the necessity of a close linkage of theses of different parts of criminalistics and the importance of accountancy that, in the end, theoretical-applied questions of forensic tactics are directed at achieving the purposes and aims of criminal procedure, which are realized during the preliminary investigation and trial. It is necessary to see that the criminal-remedial law does not contain instructions on the purpose of interrogation, identification, and appointment of a judicial examination, except for examination which is among obligatory ones (Article 196, the Criminal Procedural Code of the Russian Federation). However it does not mean that the remedial purpose of the investigatory actions named above cannot be allocated. It is speculative, proceeding from the maintenance of the corresponding positions mediating their manufacture. It is obvious that in certain cases to define the purpose of an investigatory action it is necessary to operate not only the norm directly defining the criminal-remedial order of its manufacture, but also the norm fixing the basic beginnings of criminal legal proceedings. It is necessary to notice that the concept of the criminal-remedial purposes and problems of an investigatory action has methodological value for criminalistics, because the success of working out and application of tactic means depends on how precise the regulatory expression of targeting was in domestic criminal legal proceedings. Accordingly, the categories of forensic purposes and problems will have an equal methodological value.

**Key words:** cognitive activity; investigatory action; tactical-forensic means; purposes and aims; forensic characteristics of crime.

P. 106. *Melikhov Sergey Yu.* Public Prosecutor Office of Tomsk region. **ENTREPRENEURIAL AND PROFESSIONAL RISK IN THE CONTEXT OF ADMINISTRATIVE SUBJECTS' NEGLIGENCE.** Norms of the civil legislation about the independence of economic, civil-law relations and entrepreneurial activity are treated excessively broadly in theory and practice. Scientists and practical workers emphasize that entrepreneurial activity should be carried out at one's own risk. However, independence of subjects in realization of their competences does not mean that the owner of the right is limited by nothing. The civil legislation provides a limited list of ways of distribution of economic risks and fixes a rule that imposition of the entrepreneurial risk of the subject on another person is admissible exclusively from its consent or in the cases more exhaustively specified in the law. Other transposition of the enterpriser's own risk on its counteragent or on the society and the state is inadmissible. Any influence of harmful consequences, except provided by the law, on the person who did not give the consent to it and did not make culpable actions, contradicts standard requirements and in the presence of other signs of structure of an offense should be considered as the responsibility basis. Procedure of insuring the civil-law responsibility and entrepreneurial risks does not solve the problem owing to the specificity of insurance legal relationship and constant presence of fields of activity, which are not insured. The entrepreneurial risk differs from the professional (reasonable) one as it can harm both the society and the enterpriser, but the reasonable risk as a criminal law category assumes an obligatory trespass to interests of the third parties, the society or the state. If harm from administrative negligence extends exclusively on the guilty person, this situation is covered by the content of the entrepreneurial risk and excludes criminal liability application. However, if harmful consequences infringe interests of other persons protected by law, the responsibility of the guilty subject should be estimated by rules of the reasonable risk. In practice, there can be situations which are displays of administrative negligence, but do not correspond to all conditions of the reasonable risk. These concepts differ in the motivation of an act, the scale of consequences, the form of guilt and other criteria. Hence, neither entrepreneurial, nor professional (reasonable) risks do not exclude the possibility of socially dangerous consequences for the third parties, the society and the state because of the negligent attitude of the manager to the duties. Public danger of this kind of negligence is not reduced to the risk of a trespass only to the guilty person and causes liability, including the criminal one.

**Key words:** administrative negligence; professional risk; entrepreneurial risk.

P. 110. *Prozumentov Lev M., Karelin Dmitriy V.* Tomsk State University. **PRACTICAL IMPLEMENTATION OF LEGISLATION REGULATING CRIMINAL LIABILITY AND PUNISHMENT OF JUVENILE DELINQUENTS IN THE RUSSIAN FEDERATION SUPREME COURT PLENUM RULING.** The main provisions of the Supreme Court of the Russian Federation Plenum Ruling №1 "On the judicial practice of implementation of legislation, regulating the characteristics of criminal liability and punishment of juvenile delinquents" dated Feb. 01, 2011 (hereinafter referred to as the Ruling) are under examination in the present article. The main provisions of the Ruling are compared with the previous provisions of the Supreme Court Plenum as well as with current criminal legislation. The authors point out those provisions of the Ruling which are inconsistent with the current criminal legislation and do not conform to international legal documents. Thus, nothing is said about the problem connected with the definition of the concept "juvenile" in the Ruling. According to Article 87 of the Russian Federation Criminal Code, "Juveniles are individuals who by the time of committing a crime are of or over the age of 14 and under 18". It is noted that this provision does not fully correspond to the UN Convention on the Rights of the Child (Article 1), Article 11(a) of the UN Regulations, dealing with the defense of imprisoned juveniles. It is emphasized that the Ruling contains no information relating to the inconsistency of Part 3 of Article 20 with Article 22 of the Russian Federation Criminal Code. This inconsistency is connected with non-coordination of provisions of Article 22 of the Russian Federation Criminal Code. When expert decisions based on Part 3, Article 20 of the Russian Federation Criminal Code are compared with possible findings based on Article 22 of the Russian Federation Criminal Code, some non-equivalence of the legal consequences of their application is obvious. It is necessary to eliminate the inconsistency of Part 3 of Article 20 with Article 22 of the Russian Federation Criminal Code by changing Article 22 of the Russian Federation Criminal Code, where the possibility of non-bringing to trial those juveniles who do not understand the factual and public danger of their acts to a full extent should be provided. In the authors' opinion the Ruling contains no indication concerning both general problems of imposing the punishment on juvenile delinquents and the problems of administration of some types of punishment of juvenile delinquents (Article 89 and Article 96 of the Russian Federation Criminal Code) such as compulsory work and restraint of liberty. The Ruling does not cover the requirements of the current legislation to the priority of measures of treating juvenile delinquents. In Article 87 of the Russian Federation Criminal Code, the use of enforcement educational measures is of first priority compared with criminal punishment. As it was in the previous Supreme Court of the Russian Federation Ruling № 7 dated February 14, 2000, the examination of the new Ruling enables us to make a conclusion that the given statute can be characterized only as a good intention despite the repeated mentioning of international standards and reference to the obligatory consideration of the peculiarities of criminal liability of juveniles consolidated in the Criminal Code of the Russian Federation. Having analyzed the approach of the Supreme Court we can state that it is hardly possible to speak about the changes concerning both the sense of justice of inferior courts and punitive practice (criminal punishment, suspended conviction) in the question of enforcing the norms of criminal liability and punishment of juveniles. The authors state that the clarifications given by the Russian Federation Supreme Court Plenum relating to the time of crimes completion, provided by Article 150 and Article 151 of the Russian Federation Criminal Code are inconsistent with the law. It stands to reason that in this case we should act in accordance with the law. The analysis allows the authors to stress the necessity of amending the Supreme Court of the Russian Federation Plenum Ruling №1 dated February 01, 2011.

**Key words:** liability; juveniles; punishment; age; law; enforcement measures.

P. 114. *Romanova Yuliya A.* Tomsk State University. **RATIONAL PERIOD OF COURT EXAMINATION: CHANGING ARTICLE 6.1 OF THE RUSSIAN FEDERATION CIVIL PROCEDURAL CODE.** The article presents the concept of the rational period of court examination. The method of calculating it is shown. It is noticed that its calculation and calculation of the general term of court examination for civil cases provided by part 1 Article 154 of the Civil Procedural Code of the Russian Federation (the RF CPC) lacks consistency. A solution to the problem is given. Poor regulation of the order of faster legal investigation petition resolution is emphasized. It is provided by part 7 Article 6.1 of the RF CPC. The author introduces amendment proposals into the stated article. The pressing questions of the civil procedure law are considered. Works of domestic and foreign researchers are broadly used. On January 1, 2012, a Federal law № 353-FZ "On amendments in the Civil Procedural Code of the Russian Federation" of September 12, 2010, which provides creation of the appeal instance in civil legal proceedings, comes into force, reforming the cassation order of the appeal of judicial decisions. Article 331 of the RF CPC in the edition of the law provides that definitions of the first instance courts can be appealed against in the court of appeal separately from the judgment in cases provided by the RF CPC, or when court definition excludes the possibility of further consideration of a case. Thus, it is proposed to introduce the following amendments to Article 6.1 of the RF CPC:

1) supply part 3, Article 6.1 with indications that for magistrates the rational period of court examination includes the period from the day of having the writ / petition till the day of making the last legal provision on the case; 2) supply part 7, Article 6.1 with indications that faster legal investigation petition should be considered by the chief judge in court with a subpoena to the interested parties within five days from the date the petition comes to court; 3) introduce a proposal in part 7, Article 6.1 that the copy of the decision is directed to the declarant within three days after its rendition.

**Key words:** rational period; writ; acceleration.

## ECONOMICS

P. 116. *Bondarenko Viktoriya A.* Rostov State University of Economics. **MARKETING IN TRANSIT INTERNATIONAL TRAFFIC INFRASTRUCTURE DEVELOPMENT.** Infrastructure provision is one of the most important elements in the transit of foreign traffic. Application of marketing tools in the infrastructure component of the economy is a complex event with complex organizational information-intensive stages of the adoption of most diverse solutions and leads to issuing new products / services in the market, or organizational changes in the business. Conceptual organization of such a process allows reducing the risk of bad decisions in the planning and organization of transit. Orientation of economic development, as a function of these components of marketing, is often seen in the infrastructure elements of national economic complex, in the objects of material and transport infrastructure. The geopolitical position of Russia led to its participation in the creation of a global system of international transport corridors, the longest of which are the Northern Sea Route and the Trans-Siberian Railway. Russian cooperation in this program means the possibility of involvement of foreign investment to improve transport infrastructure in the zone of existence of the designated corridors, providing transit. But there are many technical and organizational problems, not allowing the 100% use of the infrastructure capacity of transportation corridors, and the timely and modern improvement of the corridors infrastructure. As a corridor, the Northern Sea Route must operate not only year-round but also transport within the specified time intervals in accordance with the delivery schedule, but it is substantially influenced by the complex climatic and weather and ice conditions affecting the strict observance of the announced conditions. At the moment, the basic infrastructure as a basis for the international transport corridor of the Northern Sea Route is either lacking or underdeveloped (lack of icebreakers, timber, container ships, tankers, or they do not have the required compliance options, undeveloped port facilities in the ports along this route). The main problem of the infrastructure of the Trans-Siberian Railway is the low throughput due to the low overall average speed of trains. The average speed there is about 50 km/h. The whole complex of infrastructure problems of this area does not leave hope to implement a real set of measures that is likely to significantly increase the capacity of the Trans-Siberian Railway. The proposed common policy solutions of radical improvement of the transport infrastructure of international transport corridors in accordance with the requirements of the market at the moment and in the interests of the area this infrastructure serves are a successful, effective and less costly alternative infrastructure in the permanent crisis condition.

**Key words:** International Transport Corridor; Northern Sea Route; Trans-Siberian Railway; deadweight; infrastructure; international transit transport.

P. 119. *Yevstafiev Artyom I., Avdeyeva Tatyana T.* Kuban State University (Krasnodar). **LOCAL TERRITORIES DEVELOPMENT AS THE BASIS OF CITY'S SPATIAL DEVELOPMENT REGULATION.** Spatial development is based on understanding of a city as unities of material and social space of city communities' life activity, changes in each can be initiated by representatives of various groups of interests (local authorities, investors, builders, owners of land, citizens). That is why it is necessary to develop mechanisms of coordination and regulation of interaction within local city territories. The conceptual basis of the research is the socially focused approach to management of the spatial development of the city, defined as "town-arrangement". Unlike the widely applied directive ("town-planning") and business focused ("town-regulating") approaches the concept "town-arrangement" assumes introduction of corresponding methods of analysis and mechanisms of regulation of spatial development which are not reduced to building activity regulation solely. The toolkit of the town-planning technical analysis and "highest and best use" analysis, used by local authorities in support of individual investment projects, connects spatial development with achievement of commercial benefit by land proprietors. Town regulating considers social results (employment growth, increase of availability of services, favourable changes in social composition of local residents, their incomes and other social and economic aspects of viability of local communities) as an external, attendant effect of real estate development. As a result, spatial development is accompanied by infill construction and causes a number of social problems: differentiation of the social space, a descending market filtration of habitation, negative neighbourhood effect, etc. Methods and mechanisms of "town-arrangement" are socially oriented. They are aimed at creation of favourable conditions of life activity of city community within local city territories. We specified the economic definition of a "local city territory" which is defined as a community united by interests of daily life activity (local labour migration, household service, acquisition of consumer goods and services) and cohabitation. We offer the city's spatial organization analysis based on the synthesis of methods (economic, sociological, qualimetric, cartographical, of visual supervision), which allows revealing both individual preferences, and the general interests of the local society representatives. Management of a spatial development of the city should be based on the model of socially focused development of the local city territories, assuming social and economic, legal and organizational mechanisms of management of their development on the basis of partnership of various economic subjects in interests of development of local territorial communities.

**Key words:** town planning; town-regulating; town-arrangement; local market of real estate; development; spatial development.

## PSYCHOLOGY AND PEDAGOGICS

P. 126. *Bogomaz Sergey A., Karakulova Olga V.* Tomsk State University. **TYOLOGICAL DIFFERENCES IN COMMUNICATIVE POTENTIAL.** A psychological study has been conducted, in which 273 students (60% male and 40% female) from technology-oriented majors participated. The participants were offered to complete TOP-UNIT, a psychodiagnostic test designed by Moscow Human Technologies Agency, the results of which corresponded to one of 16 types in Carl Jung's typology. The difference in expression of communicative qualities in those types was evaluated by using dispersion analysis (ANOVA-MANOVA). Opposite types have been discovered, with verifiable differences in such indicators as "understanding others in communication" and "congruency", as well as "communicative potential", a summary indicator, all of which were determined by using the method of Diagnostic

Differences in Communication. Higher communicative potential was regular for representatives of rational logical extroverts who tend to treat communication in the context of their objectives and activities. Possible reasons for the observed typological differences are discussed. A correlation exists between communicative potential indicators and indicators of hardiness, self-organization, life satisfaction, and individuality, which underlines the uniqueness of the analyzed typological groups. For the group of rational logical extrovert characteristic feature was a strong correlation between indicators of “self-understanding in the communication process” and an indication of “risk appetite” ( $r = 0,505$ ;  $p = 0,001$ ), which is part of the vitality. The high indicators of communicative potential among rational logical extroverts make them more suited for top management and business administration. Ability to build effective interpersonal relations with rational logic extroverts correlates with their higher purpose and a penchant for self-organization activities. The opposite types show an inverse correlation. The analyzed typological groups verifiably differed in the indicators of self-organization, hardiness, and certain values. Small, but verifiable differences between various types’ life satisfaction are discovered, which, combined with other uncovered factors, may allow the existence of two different life styles.

**Key words:** communicative potential; hardiness; self-organization; life satisfaction; values; typology of Carl Jung; life styles.

P. 131. *Zhabin Dmitriy V.* Voronezh State University. **FORMAL SIGNS OF SPEECH IN NORM AND DECOMPENSATION OF MENTAL PATHOLOGY IN STRESSFUL SITUATION.** In modern psycholinguistics the research of spontaneous speech is most important and topical. The main problem and task is to develop a mechanism for the research of sounding material. Methods of studying the language, elaborated in the development of linguistics and having proved their effectiveness (structural methods), historically associated with the genesis and development of phonology, for a long time were inapplicable to the study of the supra-segmental level of speech. In this area the systematic approach is being formed. There is a large time gap between the research of segmental and supra-segmental levels. The possibility of the systemic approach to the analysis of rhythmic and intonation parameters of spontaneous speech allows developing research methods of sounding material in the direction from formal signs to the characteristic style of the speech and emotional state of the speaker. Studies of speech become interdisciplinary. The speech of a person in a stressful situation is subjected to various changes which, first of all, are concerned with spontaneous speech (tempo, rhythm, pauses and errors). The subject of this research is formal signs of spontaneous speech in a stressful situation. The main purpose of our experiment is the attempt to describe formal characteristics of speech in stressful situations in decompensation of psychopathy. These changes suggest that a psychopathic personality can be satisfactorily adapted in favourable conditions (compensation condition) and disadapted with a bright expressiveness of psychotic symptoms (often neurotic) in unfavourable conditions (decompensation condition). In the course of our experiment, we were able to research and describe the changes of formal signs of speech in the speaker’s state of emotional tension (stress) on the basis of auditory analysis. As a stressful situation we consider criminal investigation in court. The obtained data demonstrate that in the state of decompensation of psychopathy distinct changes in formal signs of speech are observed. Not just individual signs, but also their combinatorics is most informative. It is mostly important in the improvement of linguistic analysis in forensic purposes. The experiment proves that the speakers have a set of means to express the degree of tension of emotional state. These means have a primary function in marking speech in the process of perception. This mechanism of our research allows establishing the degree of tension in relation to each speaker and drawing conclusions about spontaneous speech in Russian.

**Key words:** spontaneous speech; formal signs of speech; stress; emotional tension.

P. 135. *Ilyin Aleksandr A., Kapilevich Leonid V., Marchenko Kseniya A., Surkov Denis A.* Tomsk University of Control Systems and Radioelectronics, Tomsk State University, Kuzbass Institute of Federal Penitentiary Service of Russia (Novokuznetsk). **PROBLEMS OF ORGANIZATION AND CONTENT OF PHYSICAL EDUCATION OF TECHNICAL UNIVERSITY STUDENTS.** Today physical education should be integrated into the complex of humanitarian disciplines of the higher vocational training: taking into account new requirements the future expert should carry out sports activity so that it became an effective remedy of development of his / her mental abilities, creativity, spiritual and moral forces. That is, the main objective of the educational process should become not only mastering complex knowledge, skills, but also, and first of all, creation of conditions for self-realization, self-development of the student, display of creativity of trainees. In humanistically focused education not only the pragmatic result, for example – to seize movement, is important, but also the process of its development. It is essential that pupils have acquired the semantic structure of movement, have received experience of its construction on the basis of a free display of the creative power. It is not a question of refusal of the “effective” training focused on the final external result, but of correct understanding of its essence when we speak about the cultural education, which is qualitatively distinct from the functional, technocratic one. Humanistically focused education is the process of going filled with creative search, joint activity, dialogue, emotional experiences. With a similar approach to teaching the personality of the student becomes a priority, and the process of training turns into a form of dialogue of subjects. During classes there are discussions, problem situations stimulating activity and independent thinking of trainees; students seize knowledge and abilities intelligently, not automatically. In the structure of physical education of the student the motivational component is essential. Motives evolving from requirements define orientation of the personality, stimulate and mobilize it for activity display. Need in physical education is the main incentive, directing and regulating force of behavior of the person, of a wide spectrum: need in motion and physical activities, dialogue, emotional discharge, self-affirmation, strengthening of the “I” position, knowledge, sports classes quality improvement, comfort, etc. A prominent aspect in physical education in higher school is formation of a healthy way of life. Now the general dissatisfaction with pedagogical sciences (methodical among them) is observed. In teaching healthy style of life, rich empirical material has been collected; the necessity to pass to the level of theoretical knowledge with its own theory and methodology has come.

**Key words:** students; physical training; humanization; personality-focused approach; health.

P. 139. *Malkova Irina Yu., Yevarovitch Svetlana A.* Tomsk State University **WORKING OUT TRAINING PROGRAMS FOR MANAGEMENT STAFF IN TERMS OF COMPETENCE APPROACH AND EDUCATIONAL PLANNING.** The article considers the particular features of using the competence approach in the fields of personnel management and education, defines the differences between a group and a team as different subjects in joint educational planning activity, and outlines the conditions of forming team developing educational programs in terms of educational planning and competence approach. The concept of educational program planning grounds the gears of forming a subject of joint activity, which allows solving the task of forming team developing educational programs and providing its qualitative staff in terms of professional, emotional and target-oriented readiness for planning educational programs for the pool of potential managers. Introducing the term of competences and competence approach into the educational activity is in many respects stipulated by the influence of the personnel management practice in modern organizations. The theory of personnel management interprets “compe-

tences” as sets of abilities, knowledge, skills and identity characteristics of a person, which have special value for efficient professional activity, become evident in professional behavior and could be described and measured. Researchers pay special attention to the fact that in order to define competences it is necessary to involve holders of different professional positions into the development of training programs for management staff. The studies, devoted to the issues of organization development, reveal that one individual has insufficient knowledge and competence permitting to develop and introduce solutions able to bring the organization to success in a fast way. But effective teams are able to do it. The specific character of a team is defined by its differentiation from a group. Groups represent a traditional form of consolidation for development of a product, each group member is responsible for specific field of activity, and the leader is in charge of the common integration and the overall result. There is no strictly fixed function division in a team, not only the leader but all the team members are responsible for the overall result. We have distinguished the stages of business-coaches team building to work out efficient training programs for the management staff of Tomsk region (on demand of the Tomsk Region Administration). Team making starts from defining the competence profile, developing the methods of appraisal procedures and selecting business coaches on the competitive basis. This is followed by a stage of business coaches training which provides the necessary prerequisites for successful team work in working out the content of educational programs for the pool of potential managers.

**Key words:** educational projecting; personnel management; subject position; project team; educational program.

P. 152. *Molchanova Lyudmila N.* Kursk State Medical University. **CRITERIA AND FUNCTIONAL CONTENT OF PROFESSIONAL-PERSONAL IDENTITY OF HIGHER SCHOOL TEACHERS.** The comparative methodological analysis of modern theories and approaches to structure of professional and personal identity allows seeing that it represents an integrated psychological phenomenon including emotional, cognitive and motivational components of the person (Z. Ermakova, E. Yermolaeva, L. Schneider, E. Zeer, E. Ericson, N. Ivanova, T. Kozyreva) and providing adaptation to the changing conditions of the environment. However, for today the problem of studying of correlation of structures of professional-personal identity and social psychological adaptation remains undeveloped, which simultaneously defines both the urgency, and the purpose of the research: studying the criteria and functional content of the professional-personal identity of higher school teachers considering the criterion of satisfaction in professional work. As the conceptual bases of research of the criteria and functional content of professional-personal identity, we started with the fact of presence of interrelation of emotional, cognitive and motivational components of the person (Z. Ermakova, E. Yermolaeva, N. Ivanova, T. Kozyreva) and considered professional-personal identity as a component of the person providing successful adaptation to changes of social-professional space (E. Yermolaeva). As criterion of effective professional development we accepted the degree of satisfaction in professional work (A. Markova). The assumption is empirically proved that social-psychological adaptation in the structure of professional-personal identity carries out the system-forming function, providing adaptation to the new system of relations; and its measure of integration can be considered as the criterion testifying about effective professional development; its substantial characteristics can be considered as the parameters of formation of professional-personal identity. The results of the research have allowed drawing conclusions that the structural organization consisting of such substantial characteristics of social-psychological adaptation as adaptation, self-acceptance and emotional comfort can be considered as the criterion of professional-personal identity. The ability to adapt easily to the new system of relations and changing conditions of the environment, maintenance of the positive attitude and sensation of emotional balance act as parameters of formation of professional-personal identity; the function of social-psychological adaptation of the person in the structure of professional-personal identity is shown in the maintenance of the key role of the emotional component.

**Key words:** social and psychological adaptation; professional-personal identity; satisfaction in professional work; criteria and functional content of structure; higher school teachers.

P. 147. *Sherin Vladimir S.* Tomsk State University. **FORMATION MODEL OF MANAGEMENT ACTIVITY COMPETENCE OF A SPECIALIST IN PHYSICAL CULTURE AND SPORT.** The theory and practice of sport management in Russia are being established. However, development and acceptance of sport management as a profession occurs with increased speed in spite of many obstacles: unformed scientific basis of knowledge in sport management, absence of complete independence of sport managers’ work, absence of a developed codex of moral behavior in sport management, insufficient examination of managers’ competence in the sphere of physical culture and sport. According to all mentioned above, there is a need for describing the model of forming of activity competence of a manager in a sport organization that defines the aim of the work. In whole, professional competence of specialists in the sphere of physical culture and sport includes a system of general and special psychological and pedagogical knowledge and abilities, which are necessary for efficient realization of educational activity; economic, management and legal training that allows playing different social roles themselves and preparing students for it; developed integral professional thought and mind that provide for success of professional and pedagogical activity. The competence model of a specialist in the sphere of physical culture and sport contains social and personality competence; general scientific competence; general professional competence; special competence; social competence; economic and managerial competence. The content of economic and managerial competences is connected with constructive, mobilizing, designing, communicative, and organizing competences; forming them will allow meeting organizing and management challenges connected with concrete managerial functions. To give this information to students (functions and their specificity), the educational process should be divided into 30% of lectures and 70% of practical classes. Most interesting educational forms of giving material are making a joint business-plan of a physical culture and sport organization, analysis of documents of sport organizations, management games where students play roles of sport managers and fulfill their duties and functions. Such kinds of activity are directed to acquisition of practical experience connected with the ability to fulfill general management duties. In the process of studying at university students learn the difficulties in management work in the sphere of physical culture and sport. During the study, their managerial competence is formed and, consequently, their competitiveness on the market of modern physical culture facilities. Thus, we defined the process of forming of competences on the basis of making a model with its concrete content; so we can suppose that these competences will have high quality and will meet the requirements of modern sport managers.

**Key words:** competence; specialist in physical culture and sport; managerial activity.

## BIOLOGY

P. 151. *Basevich Victor F., Makarov Igor B.* Moscow State University. **SOIL COVER HETEROGENEITY OF THE BORODINO NATIONAL PARK: ORIGIN, DEVELOPMENT AND STUDY METHODS.** The modern condition of soil cover in the Borodino

national park is defined by formation and development of several landscape types for the last 200 years: natural, residential, belligerent, historical and agricultural. The interaction of landscapes that are considerably differing in their characteristics over a long period of time determines specificity and uniqueness of soil cover in the Borodino national park. In whole, it is notable for large initial variety though all the soils are typical for the south taiga zone: these are podzolic, meadow and marshy soils. Determinative natural factors of its genesis are the soil forming rock properties, relief and ecological conditions of separate position environment. Transformation of reserve landscape structure that is a result of different reasons finds reflections in the soil cover. The powerful and lasting anthropogenic influence on the biogeocenosis soil component leads to creation of various pedoturbogenic heterogeneities that differ in scale and age. Formed as a result of known events, the modern ecological condition diversity of soil forming, sometimes characterized by sharp changes in space, defines high complexity and contrast of the natural park soil cover. The replacement of soil variety and soil types can be observed even at a distance of several meters. The available profile diversity of the Borodino national park soil cover is the result of a complex natural and anthropogenic influence on the soil. Heterogeneities of different origins complicate the study of the natural park soil cover considerably and require special methods and approach use that differ from the object of usual cartography. First of all, methods of the studied territory field inspection should be mentioned. Depending on goals and specific objects of the study the following should be recommended: 1 – area testing with the help of a net with a given cell size; 2 – laying of soil transects (the lines of testing) with a fixed testing step, transects can be parallel or mutually perpendicular for a more complete coverage of the investigated territory; 3 – laying of soil trenches for detailed elaboration and specification of the studied object structure characteristics. Comparative studying of soil metamorphosis in the conditions of different ecosystems of the Borodino reserve gives an opportunity to single out the anthropogenic component in soil development and transformation, to estimate the role of different genesis and scale heterogeneities in their modern evolution and change of natural environment in whole in high share of probability.

**Key words:** the Borodino reserve; soil; heterogeneity.

P. 156. *Danchenko Matvey A.* Tomsk State University. **SYSTEM OF MEASURES FOR IMPROVEMENT OF RECREATION POTENTIAL AND SUSTAINABILITY OF URBAN FOREST.** Developing a system for conservation, sustainability and recreational capacity of urban forest was conducted taking into account the structure of forest landscapes, the degree of disturbance of forest ecosystems, the indicators of recreational load and functional purpose plots and arrays of urban forests. When defining a set of measures, the degree of disturbance of forest landscape is taken into account as the main indicator of differentiation of the entire system, preempting the mode and intensity of agriculture in urban forests. The Green Fund of Tomsk city as the most important environmental factor of the living environment is a collection of urban land with the presence of live vegetation from trees and herbaceous plants in natural and artificial origin, including urban forests. For proper organization and management practices in urban forests a provision or regulation of the city's green fund use is required, in which a proper modern legislative framework determining the legal status of the fund balance inventory of individual objects, forms of ownership and use, administration and management, protection and reproduction, the environmental potential assessment should be given. In the course of field studies and laboratory works analysis was carried out of the plantations, proposals were developed for a sustainable protection of forest stands: species, technologies, volumes and cost cutting and reconstructive planting within the sanitary protection zone, as well as advice on gardening the territory around the plant. However, the sanitary protection zone of the Tomskneftekhim (Tomsk Oil and Chemical Plant) is not separated from the buffer zone of the Siberian Chemical Plant, where it resides; it has not been approved legally; and it is not included in materials management. The results obtained in the study of urban forests in Tomsk indicate long-term lack of care and, consequently, need to develop a system of forestry measures to optimize the health of urban forests. It is important to provide the relevant scientific evidence for these recommendations. Thus, for landscaping the urban area it is crucial to study in detail the conditions for growing plants in a suburban environment, find the right system of care for plants and carry out the selection of species with appropriate ecological features, as well as valuable aesthetic and architectural qualities.

**Key words:** urban forests; forestry activities; forest recreation; forest management system.

P. 159. *Yefremov Stanislav P., Yefremova Tamara T.* V.N. Sukachev Institute of Forest, SB RAS (Krasnoyarsk). **ON THREE MARKERS OF PERMANENT RING GROWTH VARIATION OF SCOTS PINE IN MARSH AND UPLAND DENDROCENOSSES.** The regularities of variability differentiated by the signs of growth in width of more than 210,000 tree rings from 1333 specimens of the Scots pine in seven typical dendrocenoses of hydromorphic and automorphic development on the rivers Ob and Tom are described. It is shown that regardless of the typological age and status of a pine, the common feature of prepared chronologies is their coordinated order in length and wave amplitude in the range of 7–11–13–17-year climate conditioned cycles. Within these waves, age frequency of smaller amplitude and duration appear with biological and ecological nature of the topology. It is considered that hydromorphic complexes, being self-regulating natural formations and due to their common “conservativeness”, have an evident ability to weaken or even suppress the impact of the parameters of the environment, and marsh forest stands against the latter are not sufficiently sensitive. The total dynamics of these properties reflect a weak variation width of tree rings and their small dimensions. Therefore, in this study to decipher the real reactivity of marsh stands the method of sequential accumulation of data on the leading signs of response was used. It allowed to get both theoretically and practically interesting series of prepared chronologies of radial growth for the south-taiga subzone of Western Siberia and on their basis develop a vision of the structure of the hydromorphic and automorphic forest stands reaction to the current variability of the integrated complex of environmental factors. As an example, we give a few random samples from these chronologies for the typical pine forest with a mixed-age stand structure. The study was based on sufficiently large samples, representing every second or third random tree depending on the structure of the tree layer. The graphic comparison of the actual and smoothed data showed that the state of the wetland stands of Western Siberia is characterized by contrasting cyclical swings in relative share of trees with the radial growth positive and negative signs separately. Naturally, they are contrasted to each other, but synchronized in the time of occurrence and duration. Moreover, their reflectivity is shown only to the extent that it may be influenced by the proportion of trees with the “zero” sign of growth. The cycles contain years-markers, when the proportion of trees with positive or negative effect of the reaction reaches the maximum of 84–87% and the minimum of 4–8% depending on the current combination of climatic factors and environmental confinement of plants. Representation of the neutral form of the response in the swamp forest stands did not exceed 30–32%. For specific forest types, it is practically stable although in general it tends to increase from eutrophic (2–18%) to oligotrophic (12–32%) conditions of growth.

**Key words:** Scots pine; growth; marsh and upland dendrocenoses; growing conditions.

P. 162. *Kabanova Svetlana A.* Kazakh Scientific Research Institute of Forestry (Shuchinsk, R. Kazakhstan). **STUDY OF PINE FOREST CROP GROWN IN THE PROCESS OF RECONSTRUCTION OF LOW-VALUE PLANTATIONS IN THE BURABAI STATE NATIONAL NATURAL PARK.** In the forests of Kazakhstan there is a clear tendency to increase the area of damaged ecosystems. Degradation of forests, deterioration of their health and productivity occur regularly. In these circumstances, the problem of conservation and replenishment of the existing plantations for various purposes (forest plantations, protection and green plantings, etc.) became so acute that it requires drastic measures. One such measure is to increase the forest cover in our country through the establishment of forest plantations. Forest plantations play an important and growing role in reforestation and afforestation. Planting is appropriate if site conditions do not provide the natural recovery of forests or it is difficult, or forests previously never grew there. The need to create a new crop arises in cases where lumbering technologies are not conducive to natural reforestation or destroy the resumption of pre-generation. Forestry methods are widely used in the reconstruction of low-value stands, mine reclamation, landscaping, and protective afforestation. The object of study is pines, planted as reconstructions of low-value poplar crops (planted in 1978). The soil at the site is dark gray forest, developed on the dense gravelly guss rocks. The groundwater lies at the depth of 9–10 m. The height of poplar in the wings at the time of planting pines was 3.1 m. The pines were planted in 1988 as two-year seedlings after development of 8.0, 9.5, 14.0 and 15.5 meters-wide corridors and a partial tillage. At the same location in the corridors of 9.5, 12.5 and 14.0 m wide pines were planted in 1989 with a different number of rows (3 to 5). Later, poplars in the wings were cut down. To reduce the competitive impact of tree and shrub species growing in the wings on the growth of crops planted in the corridors, furrows were made 35–45 cm deep (Certificate 673217) with an upgraded plow PKL-70. The furrows are located along the wings at a distance of 1.0–1.5 m from their walls. In the spring of 1990 experiments were conducted with planting 30 pieces of 2-year-old pine seedlings. Ice and sawdust were placed next to the rows in trenches. The control plants were planted without ice and sawdust. Analyzing the material obtained in the first years of observations (1988–1991) we can say that the best results in terms of growth options were number 2 and 8, with the 12.5 m width of the corridor. They were the leaders of all biometric indicators both in 1988 and in 1989.

**Key words:** reconstruction; timber culture; analysis of variance; rank analysis.

P. 166. *Krutenkova Yelena P., Yesipenko Yelena A., Svetlik Mikhail V.* Tomsk State University. **CORRELATION BETWEEN EFFICIENCY OF COGNITIVE TASKS SOLVING UNDER EMOTIONAL IMPACT AND EEG BANDS POWER IN CALM WAKEFULNESS.** The topicality of studying the emotional impact on cognitive processes has two aspects: fundamental and applied. The latter deals with a necessity of search for ways of information processing optimization in the world where the amount of information seems to increase exponentially. One of the ways to solve the problem is to include not only the cognitive but also the emotional sphere in the study process. The fundamental aspect is connected with variance of data on emotions role in efficiency of cognitive processes: the impact of the emotional factor had been ascertained but information about the character and direction of such an impact remains ambiguous. It is well-known that human response to the emotional impact of various signs can differ greatly. These differences can be caused either by different emotional significance of every different stimulus for different people or different sensitivity of people to emotional impact of the same sign. There are many literature data devoted to the connection between EEG spectral characteristics and individual sensitivity of humans to the emotional impact of a different sign. But cortex mechanisms of connections between different aspects of activation and valence remain unclear. The aim of the present study was to detect the impact of different emotional stimuli (positive / negative, verbal / nonverbal) on thinking activity subject to different EEG bands power in the state of calm wakefulness. Right answers quantity changes were considered under different emotional impacts and these changes dependence of EEG bands power in the state of calm wakefulness. The study of correlations between the impact of different emotional stimuli (emotional (positive and negative) words and images) on the efficiency of cognitive tasks solving (retrieval of information consolidated in long-term memory and thinking tasks) and EEG different bands power was performed. A significant increase of right answers quantity as a result of memory tasks solving under emotional stimuli was detected. An interconnection between the efficiency of cognitive tasks solving and different EEG bands power was found. The results described in the paper showed a significant increase of right answers quantity during memory tasks under negative images presentation. The influence of negative images on thinking tasks results efficiency and memory tasks efficiency differs significantly. Significant differences for the influence of verbal stimuli on memory tasks results were found. Positive emotions cause an increase in the right results quantity. It was shown that EEG delta power positively correlates with right answers quantity changes both for thinking and memory tasks under positive verbal stimuli. Direct interconnection of right answers quantity changes on positive images and EEG power in theta, alpha and beta spectral bands during solving thinking tasks and beta, gamma1, gamma2 and gamma3 when solving memory tasks.

**Key words:** EEG power; emotional impact; thinking; memory.

## SCIENCES ABOUT EARTH

P. 170. *Golubev Igor A.* Krasnoyarsk State Cadastre Chamber. **PINS MODERNIZED METHOD APPLICATION FOR ESTIMATION OF ARABLE LAND SOIL WASHOUT BY MELTWATER (BY EXAMPLE OF KRASNOYARSK FOREST-STEPPE).** The technique of measurement of washout of soil by meltwater with application of a modernized method of pins is examined. The study was done in 2009 and 2010 on arable lands of the north forest-steppe zone of Middle Siberia (Krasnoyarsk forest-steppe). The territory of Krasnoyarsk forest-steppe includes northern, central, and southern parts. Field researches of washout were conducted in the northern part, which is characterized by many forests. In our researches 40 cm pins were set at a depth of 17–20 cm in the end of winter, their elevated length was measured, and the mark on the pin at the level of the soil surface was made. After the snow melted to define the size of washout the elevated height of the pins again was measured again. Researches were made at nine structures. Pins were formed in groups and settled down along all the structure of a slope. Each group comprised from two to four pins, their total number was 94 pieces. The distance between pins in group was 10–15 cm. The experimental site, on which the researches were carried out, is divided into two areas – the northern and the southern ones. The northern area represents weak-convex water-separate surface of about 3000 m. long. The southern one is an extensive slope of the southeast exposition. Modernization of the method consisted in the following: for the purpose of the account of swelling an additional pin with a tin plate was been added in each group, skintight to the soil surface preventing its washout. The pin with a plate fixes only the size of extrusion whereas indications of the other pins also reflect the processes of washout. Thus, to define the size of washout it was necessary to subtract the datum from the additional pin from the readout of each of the core pins in the group. The results of pins measurement after the snowmelt confirm that the pin with a plate, as a rule, is

less exposed than the pins without a plate in the group. Significant territorial distinctions in sizes of hydrothermal movements of the soil cover are noted. It can be connected with a various degree of ground turfing, various distributions of thickness of the snow cover and ice, and the depth of the soil structure freezing. We shall note that the mechanical structure of the soil at the examined site is heavy loams which are subject to swelling in a greater degree than soils of the light mechanical structure. Thus, modernization of the method of pins allows applying it to estimate washout of ground from meltwater in the conditions of seasonal freezing of soil cover.

**Key words:** soil washout; meltwater; arable lands; method of pins; northern forest-steppe.

P. 174. *Zhuravlev Georgiy G., Zadde Gennadiy O., Ahmetshina Anna S.* Tomsk State University. **FOGS IN THE SOUTHEAST OF WESTERN SIBERIA.** In the given article the basic characteristics and spatial structure of the number of days with fogs in the south-east of Western Siberia are considered. Sustainable economic development in different climatic conditions requires a careful study of natural resources, one of which is climate. Fog is one of the most dangerous atmospheric phenomena for all types of transport. Meteorological monthly journals from 1966 till 2008 serve as a material for research. The study was conducted on 124 stations in the south-east of Western Siberia (*Novosibirsk, Tomsk, Kemerovo, Altai* regions). The basic climatic characteristics of fogs are the number of days with fog per month, season and year, the average and greatest numbers of days with fog, the probability of various numbers of days with fog for separate months. To estimate the spatial distribution of the number of days with fog in the southeast of Western Siberia the module of geostatic analysis GA (Geostatistical Analyst) of the ArcGis 9.3 GIS-program has been used. Using the measured values in reference points, by means of the Geostatistical Analyst module it is possible to interpolate values in other points within the given territory where measurements were not taken. The basic conclusions are as following: 1. The highest average number of days with fog observed at the stations were Kondoma (98.4), Ust-Kabyrza (95.8), Mezhdurechensk (68.3), Kuzedeevo (61.6), Maslyanino (51.3 days), Turochak (49.5 days), Katanda (42.7 days) and Kyzyl-Ozek (37.6 days); 2. In most parts of Tomsk and Altai regions the number of days with fog is 10-20 days. The same is observed in the central and western part of Novosibirsk region, in the western part of Kemerovo region; 3. In the north-eastern part of Tomsk region the number of days with fog decreases: Vanzhil-Kynak – 4.7 days, Baturino and Maisk – 7.9 days; 4. A small average of days with fog is observed in the south of Altai region, near the station Zmeinogorsk (7.8), Krasnoshchekovo (8.1) and Shipunovo (8.8), and also in the western foothills of the Altai Republic: Kara Tureck (0.7) and Ak-Kem (4); 5. The greatest number of days with fog is observed at stations Kondoma (4233), Ust-Kabyrza (4119), Mezhdurechensk (2935), Kuzedeevo (2648). The smallest number is observed at the station Kara Tureck (28); 6. The tendency to decrease in the number of fogs, marked in Tomsk region, is not observed at all stations. At many stations, there is an increase in the number of fogs per year; 7. Fogs of 1-6 days long have the greatest repeatability, except for some stations where fogs up to 30 days long (station Ust-Kabyrza) can be observed. 8. As it was expected, the distribution of probability of absence of fog on the territory shows that the least probabilities of fog practically coincide with the areas with the greatest average of days with fog.

**Key words:** fog; basic characteristics; spatial structure.

P. 181. *Kalayeva Anna A., Sednev Ivan S.* State Scientific Enterprise Siberian Research Institute of Agriculture and Peat of Russia Agriculture Academy (Tomsk). **LANDSCAPE APPROACH TO STUDYING TOMSK REGION MIRES.** Mire ecosystems influence all components of the geographical system. Mires, as well as other geographical complex, formed due to the interaction of the landscape component (crust, soil, biota, atmosphere) combined by the vertical flow of material and energy in the polydominant geosystem. Specialists of many sciences take interest in mires due to their complex structure. A number of approaches to mire study are formed e.g. hydrological, botanical, pedological, geological and landscape ones. The landscape approach is less developed. It uses methods based on the idea of landscape geosphere differentiation into several environmental systems having a genetic unity and associated by a lateral process set. The goal of the work is justification of the need to use the landscape approach for wetland investigation. The following problems were solved: choice and detail research of the key area, wetland large-scale landscape and geobotanical map composing based on field investigation data and satellite image interpretation. Investigations have been conducted since 2006 to present. 7 key areas were chosen in order to perform a large scale landscape structure research. The key areas belong to the southern taiga subzone and locate 120-150 km northwest from Tomsk. The total area of the key areas is 530 km<sup>2</sup>. The research shows that landscape investigation has a systems approach and allows us to consider the area under study from all the sides taking into account different natural components. This approach has significant advantages. The analysis of geobotanical and landscape maps showed that the former do not reflect the full diversity of the object, especially its origins. The paper deals with the comparison of landscape and geobotanical maps as research results using a different approach. The analysis of maps marked differences in the classification and spatial structure of the plot. The landscape map makes it possible not only to define the vegetation, soil, bedrock, relief border but also to identify the territory genesis and dynamics. The landscape approach to mires study allows recording the spatial combination of environmental systems components in order to do environmental management and give forecast of the Tomsk region wetland areas further development.

**Key words:** landscape approach; wetland territory; satellite interpretation; mire landscape classification.

P. 185. *Klyukin Mikhail A., Rotanova Irina N.* Institute for Water and Environmental Problems, SB RAS (Barnaul). **PROBLEMS OF RECREATIONAL LOAD ON COASTAL ZONE OF LAKES AYA AND KOLYVANSKOYE AND NOVOSIBIRSK RESERVOIR.** The assessment of recreational load on the coastal zone of natural and man-made reservoirs (i.e. Novosibirsk reservoir, lakes Aya and Kolyvanskoye) situated in the south of Western Siberia was performed. These water bodies are typical recreation and tourism objects with shores extremely vulnerable to recreational loads exceeding natural self-restoration potential. The assessment of recreational load was based on well-known estimation methods of recreation digression stages by N.S.Kazanskaya, local sites by Ye.G. Sheffer, evaluation of recreational potential and stability by E.A. Repshas as well as on the interim method for estimation of recreation loads on natural complexes by the USSR State Committee on Forestry. The recreational load on Novosibirsk reservoir was determined with the E.A. Repshas method for evaluation of recreational potential and stability. The work consisted in the estimation of 13 indices of recreational load on the 5-point scale and the calculation of the coefficient of changeability using specific formula for each coastal recreational zone. The assessment showed that the coastal recreational zones under study referred to the 3rd, 4th or 5th level of the vegetation cover recreation digression. The coastal recreational zones with good transport availability for vacationers displayed higher recreation digression. The investigations within Lake Aya were carried out with the Ye.G.Sheffer method of local sites and the one of recreation digression stages by N.S. Kazanskaya. Here, natural complexes served as the object for evaluation of recreational load. The reduced formulae were used for calculation of recreational load on 6 natural complexes where field observations took place. The recreational load on three natural complexes within Lake Aya exceeded the permissible one, that refers to the 3rd or 4th level of recreation digres-

sion. The strongest impact was registered on the coastal natural complexes (14.3 and 0.25 people/ha). The assessment of recreational load within Lake Kolyvanskoye was performed using the methods of local sites by Ye.G. Sheffer and the recreation digression stages by N.S. Kazanskaya. The load was evaluated on the north, north-east, south-east, south-west and west coasts of the lake. The south-east coast of Lake Kolyvanskoye demonstrated the 2nd level of recreation digression. The 3rd level was revealed on the north, north-west, west, south-west coasts. Relying on the data obtained, one can draw inferences about the inadmissibility of the present recreational load on natural complexes of Lake Kolyvanskoye. The recreational coasts of natural and man-made reservoirs situated in the plains or mountains of the south of Western Siberia undergo intensive recreational load. All these sites are in need of restricted access, further development and application of nature conservation measures.

**Key words:** recreational load; recreational capacity; recreational digression.

P. 191. *Podobina Vera M., Babenko Svetlana N., Kseneva Tatiana G.* Tomsk State University. **MICROPALAEONTOLOGICAL ASSEMBLAGES AND BIOSTRATIGRAPHY OF THE UPPER CRETACEOUS – PALEOGENE OF THE SOUTHEAST WESTERN SIBERIA.** In the south-east of Western Siberia, new sections of boreholes 15, 19, 23 of the Aleyskaya Area of the Gorno-Altai Expedition were investigated. Twenty four core samples from these sections were subjected to the micropaleontological analysis. Foraminifera and spore-pollen assemblages appeared the most effective of all detected microfossils. The whole complex of these microfossils enabled the age and forming conditions of the enclosing deposits of these sections to be established. Their definitions resulted in establishing the Upper Cretaceous stages: Campanian- Maastrichtian, as well as the Paleogene series: Paleocene-Eocene. In the Paleocene, the Danian-Selandian stages were outlined, in the Eocene – the Ypresian-Bartonian stages. The accompanying scheme (see Figure) illustrates the borehole 23 section as the most representatively sampled one. The age dating made by foraminifera and spore-pollen assemblages are about the same. The aspect of foraminifera, their systematic composition and the roundness of silicified pseudomorphs indicate their dwelling in the shallow coastal conditions of the West-Siberian Basin with frequently changing coastline. The occurrence of the relatively large pseudomorphs of planktonic foraminifera is indicative of their entering via the then-existing straights from southern (Kazakhstan) basins. The spore-pollen assemblages are quite abundant and diverse in systematical composition, thus indicating the vegetation growing on the nearest continent. The following deposits were distinguished: Maastrichtian-Danian (at depth 217.5–213.5 m), Paleocene (180.0 m) in the borehole 15 section; Campanian-Maastrichtian (333.6–291.8 m) in the borehole 19 section; Campanian (348.0 m), Maastrichtian (255.5–229.5 m), Paleocene (206.0 m), Lower Eocene (196.0 m), Middle Eocene (162.4 m) in the borehole 23 section. The Campanian-Maastrichtian samples contain numerous pseudomorphs of foraminifera, among them *Rotaliida* predominating. The spore-pollen assemblages predominated by the angiosperm pollen of genera *Quercus*, *Castanea*, *Corylopsis* are quite numerous at this stratigraphic level. The tricolpate pollen (e.g. *Tricolpites* sp.) is of frequent occurrence along with other characteristic forms. All Paleocene foraminifera from the studied sections are poorly preserved. Nevertheless, in the borehole 23 section (206.0 m) the forms are encountered, which allow defining the *Ammoscalaria friabilis* Assemblage including, along with the index-species, *Cyclammina* cf. *coksuvorovae* Uschakova and other species. The Early Eocene *Textularia sibirica* – *Anomalinoidea ypresiensis ovatus* Assemblage was distinguished in the same section (borehole 23, 196.0 m), which included, along with the second zonal species, other Planorotalites characteristic for the Lower Eocene. The Middle Eocene of the borehole 23 section (162.4 m) is characterized by the presence of species, among which the *Gaudryinopsis* cf. *subbotinae* Podobina Species is distinguishable that is zonal species for the Middle Eocene of Western Siberia. But all detected tests are poorly preserved. The authors append the paleontological plates of foraminifera (I–III) and spore-pollen assemblages (IV–VII) detected in the studied sections.

**Key words:** foraminifera; palynological assemblages; Upper Cretaceous; Paleogene; Western Siberia.

P. 204. *Prelovskiy Vladimir A.* V.B. Sochava Institute of Geography, SB RAS (Irkutsk). **STATE ASSESSMENT OF ECOSYSTEMS WITHIN THE INFLUENCE ZONE OF THE SAYANOGORSKY INDUSTRIAL COMPLEX.** Technogenic pollution of natural complexes is quite a new factor for the fauna of the depression, nevertheless, the mechanisms of homeostasis maintenance elaborated in the course of evolution enable an organism as a complex self-regulating and stable biosystem to level stresses from the disturbing factors under the sub-toxic environmental conditions. An advantage of animals-bioindicators is their ability to reflect adequately the state of a biogeocenosis, the chemical pollution dynamics, and the fermentation mechanism of vital processes functioning, akin to those of a human. The Sayanogorsky industrial complex (SIC) consists of the Sayanogorsky and Khakassky aluminum smelters, which are the main contributors to emissions of harmful substances on the territory of the Yuzhno-Minusinskaya depression. The harmful substances entry into the environment is associated with gas-and-dust emissions of the aluminum smelters. Currently, the most unfavorable situation develops at a distance of 0.5–1.5 km from the smelters, solids with F content settle down at a distance of 5 km, while gaseous compounds are found 30 km away from the source. Fluorine accumulation results in a sharp fall of indices of biological activity of soils and soil fertility. Investigations showed that intense fluorine accumulation takes place in dominant plant species (*Stipa krylovii*, *Helictotrichon desertorum*, *Caragana pygmaea*), bedding and living roots to a depth of 30 cm. From 1987 till 1991 within the zone of 4 km an increase of accumulation in bone tissue of small mammals was recorded. It was also found that with the approach to the source of emissions a decrease in population and simplification of the structure of the herpetobiont complex take place. Research conducted in 2006–2009 showed that in the influence zone of the SIC restructuring of plant and animal communities towards their simplification and decrease in total biomass is in progress. As compared with the data obtained in the 1990s, the pollution bubble has increased notably, and within a radius of 15–18 km from the SIC an excess of fluorine is registered in organisms of small mammals. For the first time analyses for fluorine were made for amphibians, reptiles and birds, which also showed its quite high content. For the herpetobiont population, major reconstruction of the population structure in close vicinity to the sources of emissions (1–3 km) was observed. At present in the influence zone of the SIC there occurs a substantial increase in the content of mobile fluorine in soils and its gross form in plants, which approaches 4 TLV (threshold limit values), and in bone tissue of animals from 2 to 5.5 TLV, which, undoubtedly, can affect human health and cause initial physiological disorders.

**Key words:** Sayanogorsky industrial complex; aluminum production; technogenic emissions; ecosystems.