

**SUMMARIES OF THE ARTICLES IN ENGLISH****PHILOLOGY**

P. 7. *Tolstik Svetlana A.* Tomsk State University. **RUSSIAN DIALECTAL ADJECTIVE *КОРЫСТНЫЙ* IN VIEW OF THE NATIONAL PICTURE OF THE WORLD.** The given article discusses the history of formation of meanings of appearance in the semantic structure of the Russian dialectal adjective *корыстный*. This word characterizes human appearance in Russian folk dialects from the parametric (lexico-semantic variants ‘big’, ‘small’ and ‘thin’) and the aesthetic points of view (lexico-semantic variant ‘nice’). In the dialect system the given adjective, having a wide area of distribution, is used in a great number of meanings with the basically estimation character (‘useful’, ‘respected’, ‘successful’, ‘rich’, ‘envious’, ‘strong’, etc.), including the meanings of general positive and negative estimation. The analysis of words cognate to the adjective *корыстный* in the Russian language has shown that the semantic structure of these lexemes does not contain meanings of appearance of the person. Having traced the history of the word *корыстный* in Old Russian, Russian and other East Slavic languages, the origin of the given lexeme, the author has revealed that the semantics of appearance has not been presented in this material. In order to reveal the sources of formation of semantics of appearance and enantiosemantics concerning the meanings of the scope of the adjective *корыстный*, the material of all other Slavic languages has been analysed, which showed a homogeneous enough semantic field ‘useful, favourable’. Only in the Polish-Byelorussian area the semantics of general positive estimation is observed. The meanings concerning appearance of the person are not presented in Slavic languages. Further a conclusion is made that the parametrical and evaluation characteristic of person’s appearance by the adjective *корыстный* is obviously a secondary, later formation. Meanings ‘nice’ and ‘big’ evolve from the semantic transfer from the general positive meaning ‘good’, which developed from ‘useful, favourable’. Other minor positive meanings (‘respected’, ‘strong’, etc.) developed from ‘big, large’ and ‘useful’. General and minor meanings ‘envious’ and ‘living by dishonest labour’ in the semantic structure of the Russian dialect adjective *корыстный* also traces back to ‘useful, favourable’: ‘aiming at benefit, profit, using someone else’s things > ‘envious’, ‘living by dishonest labour’ and ‘bad’ as ‘unprofitable, insalubrious’. Individual lexico-semantic variant ‘small’ (Novosibirsk), also goes back to the general negative meaning. Meaning ‘thin’ has developed from ‘small, insignificant’. A conclusion is made that the pragmatical estimation of the person by the Russian dialect adjective *корыстный* became the basis for its parametrical characteristic and aesthetic estimation of appearance.

**Key words:** historical lexicology; comparative-historical linguistics; dialectology; diachrony.

P. 11. *Ilyina Olga A.* Tomsk State University. **G. SAND’S STORY LA MARE AU DIABLE AND ITS RECEPTION IN 19TH CENTURY IN RUSSIA.** The article is devoted to the reception of G. Sand’s story *La Mare au Diable* (1846) in Russia in the 19th century. The story is a part of the series of works that include *François le Champi* (1847) and *La Petite Fadette* (1849). The series also include two novels *Jeanne* (1844) and *Les Maîtres Sonneurs* (1853). Many of Sand’s innovative means of poetics and characterology were implemented in *La Mare au Diable*. As a basis of her artistic concept Sand uses the idealization principle of a peasant and his habitual living space including the most marginal loci such as forest, swamp and field. The writer also resorts to the help of new poetic means of expressiveness which had never been used before in literature: berrichon dialect, regional peasant expressions, etc. Known as the best story of the “trilogy”, it went through numerous editions and permanently received appreciation of critics. A controversy between the Zapadniks and the Slavophiles as well as A. Grigoryev’s reception play an important role among critical reviews of the series of Sand’s “rural” works, and *La Mare au Diable* in particular. A. Grigoryev invented a term relative to this Sand’s “rural” story that he (as well as the other two ones) will call “peasant” stories (fr. “paysan” means “peasant”). Out of all articles by late Grigoryev dedicated to “peasant” works it can be concluded that it is Sand who set an impulse to a peasant’s portrayal in Russian literature. According to the critic’s opinion, *La Mare au Diable* was the first model of this tendency. In the 19th century this story was published eight times in Russia. The names of translators who created the versions of 1846, 1852, 1892, 1894 and 1897 remain unknown. In 1892 E.D. Ilyina translated it. There appeared two various translations completed by M.A. Shishmareva and Y.V. Doppelmeier during 1895. Although Russian translations of the story in the 19th century were not perfect, still they revealed Sand’s main inventions and features of her poetics to the reading audience. The most successful ones that follow the author’s intention are the translations performed by Y.V. Doppelmeier and M.A. Shishmareva. They managed to implement the task of reproducing the poetics and individual style of Sand. The analysis of creative interpretation of Sand’s inventions in Russia must be examined as a separate topic. At the same time, it should be mentioned that I. Turgenev and D. Grigorovich were the authors who turned to people and embodied the appearance of a new humane attitude toward a peasant in their works. But while Turgenev in his *Zapiski Okhotnika* is akin to Sand as the author of *La Mare au Diable* in the writer’s attention to a peasant’s inner world, lyrical intonation of narrative, Grigorovich and the French writer have the feeling of sympathy to the lower class that reaches idealization in common, and a desire to protect a female personality. Thus, Russian reception of the story in the 19th century displays a successful intercultural transfer.

**Key words:** reception; criticism; translation; “peasant” literature; series of “rural” stories; marginality.

P. 15. *Kononchuk Inessa Ya.* Tomsk State University. **ON THE HISTORY OF FORMATION OF THE ROMAN NOTION “ORDER”.** Linguistic units that nominate such basic concepts of culture as order are interesting both as a part of history and culture, and as an object of defining the historical depth of its formation and genetic connections. Modern European languages possess lexemes with the meaning of order ascending to Latin *ordo* (Ger. *Ordung*, Engl. *order*, Sp. *orden*, Fr. *ordre*, It. *ordine*). The analysis of usages of *ordo* by Ancient authors shows chronological changes in its semantics: “order, plan”; “row, line”; “row of seats in theatre, benches”, “line, rank, front”; “layer”; “stratum”; “position of centurion, head of centurion, manipul”; and, finally, “group of people, crowd”. All the derivates of *ordo* expressed the idea of a certain order, conformity of something. The substantive *ordo* is a derivate of the verb *ordiō* “weave”, “begin”, “speak, address”, “start”. The comparison of the meanings of the cognate words allows finding units with the semantic dominant “join, bind” (Old Ind. “attach, bind”, Gr. ἀπαρτόσκω “bind, join”, ἀρθρός “union”, etc.) and units with the prevailing meaning “be valid, proper, suitable, satisfactory for something” (Old Ind. *rtu-* “definite time, order”, Avestan *raiti* “ready for service”, Gr. ἀρέσκω “satisfy”, etc.). Indo-Iranian languages back in pre-Aryan times had words that acquired the status of cultural-historical

terms. The common one is \*arta-/\* ṛta- meaning “suitable, proper”, and later “truth; justice; world order; right; law; holy order; deity of truth, world order of Arta, Asha”. V.N. Toporov in his Etymology and Semantics Studies notes that “ṛtā- unites, links a thing to a thing in the Universe”. The truth (ṛtā) of the world is interpreted as a correct organization of objects composing it. The idea of unity of components, which in total represent a thing ordered, complete and organized is a part of the semantics of Arm. *ard* “structure, construction, form”, Tocharian A *ratāk*, B *retke* “army, military formation”, Lat. *ars*, *artis* f “craft, skill, mastery”, i.e. skillful combination, correct sequence, definite order of actions. Cognate Slavic and Baltic units show the dominance of the meaning “row, order, conformity with the order” in their semantics: Old Rus. *рядъ*, Old Slav. *рядъ* “row, rank, position”, Bulg. *редъ* “order, line”, Slovenian *rēd* “row, order, line”, Czech *řad* “order, class (botanic), line”, Pol. *rzęd* “row, order”, “state system”, Lithuanian. *rinda* “row, line”, *susirindoti* “stand in rows”, Latvian *riņda* “row, line, text line”, *rist*, *riedu* “put in order”. The analysis of words ascending to the IE root \*ar-/\* ḥ - “unite, join, suit, fit, match” showed that the transformation of the unit's original meaning of a constructive technical action resulted in Latin in a new weavers' term *ordior* with the semantics of a particular action “form basis” (place threads in rows, in definite order) and in its contribution to the formation of the socially significant term “order”. The basis of the abstract notion “order” is the idea of a syntetic action connected with the process of simultaneous combining and positioning (in a row) of separate elements that conform to one another.

**Key words:** genetic cognition of languages; semantics; semantic reconstruction.

P. 19. *Konyuk Anastasia V.* Tomsk State University. **HISTORICAL AND CULTURAL ASPECT OF FAMILY NAMES STUDY IN LEXICAL FIELD “PERSON” (USING THE MATERIAL OF AN OFFICIAL LETTER).** The aim of the article is to represent historical and cultural information contained in family names of Tomsk district in the 17th century. Names are the “product” of a certain era and certain culture. They contain valuable information. The analysis of these names notifies the knowledge of the language of the era, when the name was formed, about cultural contacts of people that created names and about social relations and special ways of thinking. In the process of analysis of anthroponyms in the lexical field “Person” micro-fields were distinguished with the following meanings: 1. “Physical and physiological characteristics of a person”; 2. “Personal characteristics”; 3. “Mental abilities”. It is important that often appellatives, which names were based on, have very many meanings. In this case different meanings may belong to different lexical fields. Words designating special features of size and form of the body (Bolsheninov, Dolgov, Vysoky, Butusin, Kuhrbatov, Kruglyhin, Shiryaev etc.); person's parts of the body (Moklock, Glazunov, Golovin, Nosov, Ushakov, etc.); illnesses or injury (Zudov, Zhelvachihin, Krivoy, Khokhryakov etc.); eyes or skin colour (Belogolov, Belous, Rudakov, Chernoy etc.), presence or absence of hair and its structure (Kologrivov, Kudryavtsev, Lysoy etc.) belong to the first micro field. There were 12 groups that we distinguished in “Personal characteristics” micro-field: pride (Kopylov, Lomanov, Nadutysh); laziness (Baidayev, Grizov, Kushpelev); aggression (Shabalov, Likhanov); stubbornness (Baturin, Butrimov) and others. “Mental abilities” micro-field contains two opposite groups: clever (Golovin, Sorokoum, Tanai etc.) and stupid (Bulyzhka, Gagarin, Lokasov etc.). For person's mental ability classification they use objects of flora (Doob), fauna (Baranov), birds (Gagarin), names of profession (Tolmachev) or body parts (Golovin) are also used. The general specific of these micro-fields is that mostly negative qualities of people are described: physical disadvantages, a disproportionate figure, negative character qualities, illnesses, lack of cleverness. Predominance of negative appraisal is typical for the Russian language and culture. Another specific feature of the lexical field “Person” is that there are plenty of archaic and dialectal words that are unknown in modern Russian language (Shiryaev, Khohryakov, Bunakov, Kosterin, Sozonov etc.).

**Key words:** anthroponyms; lexical field; person.

P. 22. *Kryukova Larisa B., Dvizova Anna V.* Tomsk State University. **THE SEMANTIC MODEL OF TACTILE PERCEPTION AND ITS REALIZATION IN THE POETRY OF B. PASTERNAK.** Perception is considered a universal category of human consciousness and it is one of basic ways of reality cognition. Language units with perception semantics are regularly represented in different parts of linguistic system. Consideration of semantic models (predicative component and its extenders), which present different perception types, is effective, as it makes it possible to focus attention on the situation of sense perception on the whole, and also to single out its certain aspects. The specifics of the author's perception of the world, reflected in text, form an individual style of the writer. The author's creative individuality becomes apparent in his distinctive methods and means of linguistic implementation of some life situations. Basic semantic models often change and gain diverse shades of meaning. In the given article the means of linguistic modelling of tactile perception situation are analysed in the poetry of B. Pasternak. Tactile sense is one of most important sources of human knowledge of space and properties of objects. It is principle for an appropriate semantic model to have an indication of subject and organs, whose help is necessary to realize the process of perception (somatism – designation of active organs of perception): hand, fingers, lips, and other body parts. Proposition can be presented by predicative and impredicative modes. The predicate manifests itself in basic verbs of tactility: *прогать* (to touch), *касаться* (to touch), *осязать* (to feel), and other verbs of perception, action and movement: *обхватить* (to embrace), *цеплять* (to catch), *лить* (to pour), *пронзить* (to pierce), *гладить* (to stroke), *скользить* (to slide). In the work of B. Pasternak verbs *целовать*, *обнимать* (to kiss and to hug) and combinations of words *ронять поцелуи* (to drop kisses), *покрывать поцелуями* (to cover with kisses), *обхватить руками* (to embrace by hands) and other take a special place. The same verb (for example, *лить* – to pour) is able to designate not only tactile-perceptual processes, but also visual and aural perception, and a sense of smell. In cases of impredicative representation of a situation, adjectives *холодный* (cold), *ледяной* (ice-cold), *мокрый* (wet), *влажный* (moist), *липкий* (adhesive), *клейкий* (sticky) and others are generally used. It deserves a special attention to consider the functional load of linguistic means with tactile semantics: verbalization of intellectual activity, mental state of human, conditions of nature, physical activity etc. The statements, which reflect this perception type within the concrete poetic text, are able to function as text forming and meaning forming units (analysis of the poem What Hot Blood the Twilight Has, 1914). An efficient use of various stylistic means – perceptive metaphors (synesthetic combinations of words above all), similes, personifications, antithesis and oxymoron – is evidence of significance of tactility in the world poetic picture of B. Pasternak.

**Key words:** semantic model; perception; tactility; predicativity.

P. 27. *Rouchina Ulyana V.* Tomsk Polytechnic University. **METAPHORICAL MODELLING IN SCIENTIFIC HISTORICAL TEXT (ON THE MATERIAL OF THE COMPLETE COURSE OF RUSSIAN HISTORY BY S.F. PLATONOV).** The paper provides analysis of functions of the metaphor in scientific historical texts. The system of metaphorical models actualised in the system of image nominations in the text of The Complete Course of Russian History by S.F. Platonov. The relevance of investigation of systems of metaphorical nominations of scientific texts is determined firstly by the interest of modern linguistics in studying deep cognitive

mechanisms and their language representations in textual structures of various discourses. Cognitive linguistics begins a new stage of studying the character of speech and intellectual activity. The language itself is not considered as a separate isolated system but rather as a part of a whole, a part of a linguametal mechanism. The analysis of cognitive processes, which lie in the basis of generation of linguistic units of various levels as well as in the basis of speech generation processes, is one of the main objectives of modern cognitive linguistics. Researches in this field develop the concept that there is a mutual dependence between cognitive and language structures, moreover, the language form does not merely reflect cognitive mechanisms, but rather takes an active part in their organization. The metaphor plays an important role among language forms of representation of cognitive processes. One of the main aspects of metaphor, which is in the focus of latest scientific researches, is its semantic modelling capability. Secondly, the relevance of the subject of research represented in this paper is determined by the fact that development of cognitive science in the end of the 20th again raised the problem of scientific thinking patterns in relation to the opposition of patterns of reflection of reality for mathematics, humanities and natural sciences, as well as in relation to the role of certain scientific thinking pattern in cognition. The problem of scientific cognition patterns in turn brings up the problem of language marking, which is solved using the theory of conceptual metaphor. This paper is focused on studying functions of conceptual metaphors represented in the system of image lexical nominations in scientific historical texts. The subject of the research in this paper is the metaphorical modelling of the process of historical reality, represented in the scientific text. The objective of the research is to analyse the metaphorical representation of historical process by a Russian historian S.F. Platonov represented in The Complete Course of Russian History, as well as to determine the ways of metaphorical reflection of specific interpretation of the historical process by this author, particularly, his image of the stages of political, economic and cultural development of his country, his attitude to authorities and people, their living conditions and response to important events in their country.

**Key words:** metaphorology; linguistic cognitology; concept; discourse.

P. 31. *Sukhanova Sofya Yu.* Tomsk State University. **ANTIQUE SIGNS IN PARATEXTUAL ELEMENTS OF THE RUSSIAN POETRY OF THE SECOND HALF OF 20TH CENTURY.** The article is devoted to exploration of antique signs in paratextual elements of the Russian poetry of the second half of the 20th century. There have been identified the types of poems' frame texts, in which an antique pretext is used. The paper explores the functions of the following paratext types: "From...", "Imitation", subject nomination, headlines enclosing a subject and its extensions (a predicate, attributes), titles of antique literary texts included into frame texts. The aim of the paper is to examine the functioning of antique pretext in paratextual elements (frame text of a poem collection, cyclus, a poem). The use of a borrowed word in a frame text creates the effect of a twofold intertextuality: as relations of a text and paratext and also as interrelation of a text and a pretext. The heading comprises the program of the literary work and the key to its understanding. Frame elements placed to the strong position of the text (the heading, the first line, the first passage, the ending and etc.), create the horizon of expectations (H.R. Jauss), the perception attitude of a literary work, the key to its interpretation (U. Eco). The poems of various poets of different generations and trends in literature are examined; the choice of the material is grounded not by the unity of aesthetics and not by similarity of poetic worlds, but by the type of headings. It is not important how the antique elements functioning mechanisms in intertextual poems' headings are determined by different aesthetics. What is important for us is how the horizons of expectations of various types are created for readers of a new text. The relations of a basic text and paratext, as well as preferences in the choice of that or other type of intertextual heading, are sure to depend on a poet's aesthetics, but this task is a research perspective. The headings marking, from the first sight, a translation, or imitation in a modern Russian poetry, serve as a rule as a starting point of a meditation, and such poems embody a general, condensed image of the poetic world of an antique master of letters, or – wider – a group of antique pretexts, up to the colligated image of antique poetry in general. The subject heading is necessary for a reader's attitude formation towards the whole context of all the myths, connected with the personage in the heading. The headings comprising the subject and its extensions narrow the horizons of expectations of a poem, modelling a condensed lyric subject-matter in a frame text. At that, the predication can relate to the pretext ("Mscheniye Akhilla") as well as to the new text ("Frontovyye amury"). The similar function is fulfilled by the use of antique texts' headings in frame texts. In this case the role of the subject is taken by the antique heading as such, which can be used both with a predicate and without it. The difference is that a literary work becomes a pretext, and this literary work, embodies a definite conception of the original author, his understanding of the world, the peculiarity of his imaging, which has become a part of reader's cultural consciousness, therefore the heading itself refers to this whole, bringing into reader's perception focus particular aspects of contents and form. Therefore, in such heading there lies an obligatory juxtaposition or contraposition of artistic conceptions of a quoted and a new literary works. These relations can have an explicit or an implicit character in the text itself.

**Key words:** intertext; paratext; frame text.

P. 37. *Fil Yulia V.* Tomsk State University. **POLYPREFIXATION OF VERBS IN THE OLD SLAVONIC LANGUAGE.** Slavonic polyprefixation of verbs as a language phenomenon causes interest of researchers in several aspects: its wide prevalence in a number of languages (Greek, Celtic, German, Romance, etc.); place and essence of the given phenomenon in the system of form- and word-formation of the verb in various languages; functions of secondary prefixes, the mechanism of their joining to the verb, number of secondary prefixes, etc. Analysing polyprefixal units on the material of the Old Slavonic language is motivated by the genetic relations of the given language with other Slavic languages and with ancient Greek, in which this language phenomenon is fixed, and by the general thematic specificity of the lexicon of the given language connected with the history of its creation. The work is based on the material of The Old Slavonic Dictionary (by manuscripts of 10th–11th centuries) under R.M. Tseitlin's edition. The overall number of polyprefixal verbs is about 40 units (without their grammatical and word-formation variants). The analysis of Old Slavonic polyprefixal verbs has revealed that they are represented by units with secondary prefixes **въз-**, **за-**, **из-о-**, **по-**, **про-**, **предь-**, **разъ-**, **сь-**. The basic circle of semantics brought by secondary prefixes in the Old Slavonic language is the following meanings: prospectivity, superiority and intensity of action, compatibility, reciprocity of action, beginning with a shade of strengthening and potency, finality, completeness of action. A peculiar feature of the Old Slavonic language in the polyprefixation sphere is secondary prefixes with spatial meaning, which is not characteristic for other Slavic languages. It is explained by the possible influence of ancient Greek models of polyprefixal verbs, which actualise spatial reference points of action (near, around, out of, etc.) and have a significant number of composites formed by similar models. The lexical features of the Old Slavonic composites cause particular interest. There are units of the following lexical-semantic groups among them: verbs of intellectual and speech activity, emotional condition, social activity, existence, verbs of physical action (less frequent). The thematic scope of the analysed units is connected with the fact that problems of people's spiritual life, questions of faith and other vital values are significant for the native speakers of the Old Slavonic language, while the physical side of exis-

tence is less important. The carried out analysis of polyprefixal verbs allows making a conclusion about the complexity and ambiguity of the Old Slavonic polyprefixation, which represents one of the ways of extending the semantics of the Slavonic verb.

**Key words:** verb polyprefixation; secondary prefixes; Old Slavonic language.

## PHILOSOPHY, SOCIAL AND POLITICAL SCIENCES

P. 42. *Gavrilov Yevgeniy O.* Kuzbass Institute of the Federal Penal Service of the Russian Federation (Novokuznetsk).

**RELIGIOUSNESS METAMORPHOSES IN MODERN RUSSIA IN THE CONTEXT OF GLOBAL SOCIAL CHANGES.** The purpose of the given research is to define the place of religion in the modern world and in Russia, to reveal the basic tendencies of its development. Nowadays the positions of traditional religions are weakening in all secular states, against the background of the wide circulation of the new religious trends. The reason of these changes appears to be the secularisation, which transformed the social role of religion, caused the situation of religious pluralism and competition. As a result, the object of a religious belief frequently turns out to be a product of any designing according to the utilitarian inquiries of masses. Therefore, if for some religious associations (as a rule, for the traditional religions) preservation of doctrinal bases in their authentic variant is a priority, for others it is following to tactical reasons. The definition of the basic directions of religion development becomes possible due to the reference to the utopianism phenomenon as it accumulates the energy of social transformations. Transfer of initially transcendental religious ideas in the practical vital way appears to be the major component of a wide spectrum of modern religious-utopian creativity. Thereof further development of religion is viewed either as creation of a recipe of terrestrial well being, or as an attempt of construction of sense in a counterbalance to utilitarian values. Extrapolation of global changes in the sphere of religious activity on the processes occurring in Russia allows revealing four utopian projects. The first is based on the material of archaic religions. The second is aimed at the revival of traditional faiths in their initial form and the status. These projects are connected by the intention to protect the fundamental religious values from devaluation. The third project is caused by a special place which science occupies in the world. Here scientific categories turn into representations of powerful forces of the Universe, take a position in the good and evil dichotomy. The fourth project represents religion as a certain "game". Comprehension of the accepted positions convention with a serious relation to values underlying them becomes its main feature. Thus, integration of Russia into the world process makes its susceptible to transformations in the sphere of religious activity, leads people to the way of religious-utopian designing. For religions there is a problem to find the measure of flexibility in reaction to calls of time, which will allow them to remain competitive and simultaneously to keep their authentic character. The religion endures crisis, which can be the moment of "choice" of the further way of development, a threshold of the new social forms.

**Key words:** secularisation; desecularisation; religion; religiosity; utopia.

P. 50. *Evstropov Maksim N.* Tomsk State University. **NECROGENEALOGY OF "SENSE": HEGEL, HEIDEGGER, BLANCHOT. PART 2.**

The specific exteriority of the corpse, which allows Maurice Blanchot to withdraw the discourse of death beyond the limits of existential possibilities, appears to be also the *image* of the "ownmost", and its specific experience will be analogous to that of the image itself. And this compromising analogy is just the point that determines mainly the perspective of the necrogenealogy of sense. It is possible to distinguish between the two ways of being of the image – as an image of something (such is the image-sign), and as an image of itself (such is, in fact, the platonic *eidos*). However, in every image of something one can discern the image of itself, and the independence of this inimitable paradigm is just the basis of possibility of dependent and functional use of the image as a sign. But the image *itself*, the sovereign image *as such*, is the manifestation of absence. This absence in the depths of the thing is nothing but its "being", or the ontological element, which is enclosed in it. On that ground the image *itself* is no longer a representation, but the direct self-annunciation of the "fact of existence". And this ontological element of the "imaginary" also appears to be the friability of *ashes*, because corpse or remains is also the manifestation of absence in its way. Ashes are such a *thing*, which is its own image at the same time. A dead person becomes totally *self-resembling*. But this self-resemblance is no longer the resemblance with the live, and it is no longer possible to identify this anaphoric likeness somehow. Corpse belongs not to the being-onto-death, which is making death *possible*, but to the eternally returning irreality of death, to the incessantness of existence – to the fundamental-ontological element of the naked "being". And such is also the abode of the sovereign image. The image "precedes" the sign. In its elemental crudity the image does not make sense. The sign displaces it in order for the sense to become possible, but it remains nonetheless – as the sense-less trace of its own displacement. But this trace is the ashes, the sovereign cadaverous analogue. So, cadaver is "inscribed" in any icon, image and likeness, and the cadaveric decay – in the very heart of mimesis. Corpse resides duplication, iteration, the same, the common and the common places, for the cadaverous is "here", the displacement or the place *as such*. Corpse, this obscene and senseless outcome of existence, turns out to be the heterogeneous source of "sense", announcing us that the human culture, finally, is nothing but polymorphous necrophilia. Despite its seeming irrelevance, necrogenealogy of sense forms a sort of *topos* of modern genealogy in general, being a concentrated expression of the an-archic genealogy of the "primordial shift". And the negativity of ressentiment, this driving force of many genealogical critics, finds its unexpected dénouement in this *topos* of some peculiar black humour. However, this dénouement is neither Hegelian totality nor Heideggerian authenticity for more, but their *image* if so.

**Key words:** Hegel; Heidegger; Blanchot; genealogy of sense; image.

P. 58. *Karpova Anna Yu.* National Research Tomsk Polytechnic University. **MECHANISMS OF INFLUENCE ON MASS CONSCIOUSNESS IN THE FIELD OF POLITICAL COMMUNICATION OF REGIONAL PUBLIC TELEVISION.**

The article describes the mechanisms of influence on mass consciousness in order to create the field of publicity in Tomsk region. In a democratic society the structure of relations between the authorities, media and the audience should be of a single-level parity type. However, the modern Russian society is moving towards constructing a vertical one-party power. The media, biased by various branches of government, play an important role in this process. The one-level system of communication turns into a vertical one-way conversation, in which there are only vector relations. The formal strategic innovations in the functioning of regional TV in the institutional system in Tomsk are the strategies that involve a change of the electorate as related to time changes. The analysis of the construction of a regional public field in the institutional aspect during election campaigns is used as an example. The dynamics of changes in electoral behaviour is indicated in the form of three stages: romantic-demagogic, evaluative and pragmatic. The mechanism of transformation of the interests and aspirations of various forces in real policy inevitably entailed the construction of their plots of the field of publicity, with their own theme and manipulative resources, which reflect the essence of the changes in the public sphere in the political arena of Tomsk

region. It is the emergence of a new information field that sooner creates the manipulative, not information-analytical, field of public "pseudo reality". Television today personifies the social and political contradictions, presenting them not as a clash of social interests (the stratum of local groups), but as a clash of interests of personalized power (political leaders, bureaucrats, big property owners) who are at various stages of the vertical of power and its various segments. The main conclusions were the following theses. The commercialisation of the media is ordered. The authorities lost the resource of "operation by default" and for this reason it is necessarily indifferent to public opinion. With this, the latent function of manipulation is to influence the political alienation of the individual – the political elite limits individuals' participation in exercising power, maintenance and cultivation of a unidirectional model of the field of publicity (the political "temperature" of the society of indifference and paternalism to the public of rapid approval.) But this is impossible without the media and TV in particular. Legitimacy in the end is invariably based on people's trust, which manifests itself not only in the tacit indifferent approval, but also in the form of the so-called "participatory democracy" – elections, referendums, meetings with politicians, demonstrations of support and protest, strikes, etc.

**Key words:** participatory democracy; chain of command; fourth estate; advance expectations; advance behaviour; leaders of opinion; groups of influence; default functioning.

P. 62. *Mazaeva Olga G.* Tomsk State University. **ETYMOLOGICAL DESCRIPTION OF THE WORD COMBINATION "ANTIQUE PHILOSOPHY".** In the present article there is investigation of the etymology and sense sources of the term "antique philosophy" in the context of philosophy's history and culture. The word "antique" means ancient, Greek and Roman, classic. Later Romanian traditions prevail in the romance countries, Greek traditions – in Germany, Byzantine heritage – in Eastern Europe, Russia, Transcaucasia and a part of the Near East. Plato discovered the contents and sense of the notions "philosopher" and "philosophy". He considered that the philosopher is a particular figure in the society, and philosophy is the particular life and thought pattern, which are formed by the idea of absolute wisdom. After that well-established sense of these notions were transferred to 6 century B.C. on the personalities of Pythagoras, Heraclitus or Herodotus. Then in the present article there are characteristics of the word "philosophy" components. The word "Philia" was investigated among different notions, which mean state of love. Plato developed and systematized various characteristics of Eros (mythological image of a philosopher) and Socrates (historic personification of a philosopher) in dialogues "(The) Symposium", "Phaedrus" and others. Enthusiasm, pathos, ecstasy were added to the image of ecstatic and mystic nature of knowledge. Notion "Philia" emphasizes the direction of lessons, which are full of high love of the true wisdom. The word "Sophia" means wisdom. This notion possesses a wide range of meanings; it was used in various contexts. Let's single out three of them: manifold experience of wise men (7–6 centuries B.C.); sophists' practical wisdom (5–4 centuries B.C.), who were representatives of rhetoric culture; true, divine, absolute wisdom, which exists always, everywhere, in its entirety, without exceptions, distinctions and degrees. Lack of wisdom has its own distinctions. People who do not possess wisdom are divided into two types: those, who realize that they are such – these are philosophers, and those, who don't realize it, they are ignoramus. Then we single out five figures and five types of various attitudes to wisdom. Two of them, Deity and Ignoramus, are deprived of philosophy's source (their speculative activity is zero). The others (Wise man, Sophist and Philosopher) have various degrees of theoretical (speculative, intellectual) and practical activities; they are inclined to philosophise. The special status of the philosophising man is non-self-sufficiency. The philosopher's medial position between Divine and Ignoramus transforms him to the ironic man and/or tragic hero. The Notions "Logos" and "Ratio" are important to understand the subject "Sophia". Conceptual development of the absolute, the supersensual and the ratio focuses on Logos and is defined terminologically in Sophia. Conceptual development of other notions – enthusiasm, pathos and ecstasy – focuses on Eros and is defined terminologically in Philia. Philosophy appears as inseparability and indivisibility of Eros and Logos. It is alive due to binarity and/or polysemy, which include a wide range of sense combinations of every source.

**Key words:** Antique philosophy; philosopher; sophist; Eros; logos; ratio; ironicality; tragedy.

P. 66. *Perunova Natalia V.* Omsk F.M. Dostoevsky State University. **INTRODUCTION OF CONCEPT "VALUE ARCHETYPAL COMPLEX" ON THE BASIS OF RUSSIAN AND GERMAN CULTURES.** This article presents the concept of a value archetypal complex (VAC) as a gist of culture. The value archetypal complex is a psychologically determined choice made by the primary group of people (that later became a nation) of interaction between the psychological and spiritual bases, which defined its peculiarity and its historical way. These interactions are absolute development of the idea of a people in space and time in the context of general movement towards solving the problem of struggle or cooperation of the world's bases. The VAC is determined by the following concepts and interactions between them. The nature archetype as an interaction between nature and human includes a model behaviour in situations of life, death, birth, human's attitude to nature as a physical world and as a sacred nature. The social archetype as a superstructure above natural, relations between a human and the society include characteristics and allocation of key agents (leader, hero, woman). A relative value in human understanding is an absolute value, an idea and ideal. It also is something that a human takes from the social life as a creative work result. The absolute truth can be understood as a human desire to transform the world in order to remove the world's discreteness. Having compared the contents of German and Russian cultures the following models of the VAC were determined: 1. Western European VAC. Relations between the human and nature. Nature is understood as an inanimate material and the humankind rapidly changes it. As a result of rationalism and subjectivism, the industry-oriented economy based on competition appears. But the human also refers to nature; it means that the human itself is not divine. The result is the rejection of God and the absolute truth as if it does not exist. Relations between the human and the society. The triumph of the woman's archaic beginning over the hero and his death. The leader is under her will. The woman's beginning as something intuitive, spontaneous is the source of irrational. The man's beginning is under the woman's total control. The hero as an exponent of a powerful and independent position dies. Woman's irrational beginning promotes the leader's actions. And these actions place themselves in formal rationalism. 2. Russian VAC. Relations between the human and nature. Nature is something spiritual, divine; the human tries to stay in contact with it. As a result, imaginable, intuitive world cognition, resource-oriented type of management appears. The human creates his world without destruction of the natural one. Relations between the human and the society. Equality between the woman's image and the hero that stand under the pressure of the leader. The leader personifies God. Woman's beginning means people's soul that turns to the hero and personifies his assistant and his reward. This hero stands as a society (a new type of relations) creator. In these relations the human bids a farewell to the mythological past where the human is under an absolute control of nature. The leader unites the woman's beginning and the hero and provides external relations and contacts with other nations and with God.

**Key words:** values; archetypes; culture; value archetypal complex.

## CULTUROLOGY

P. 70. *Korobeynikova Tatiana S.* Tomsk State University. **SIBERIAN AVANT-GARDE AS A CULTURAL PHENOMENON (BASED ON THE 1960S–1980S WORKS OF ARTISTS).** Avant-garde is a term to describe the phenomenon of art and culture, resulting from the scientific and technical progress of the last century, which has distinctive and common features: deliberate, pointed experimental. Russian, in particular, Siberian avant-garde of 1960s–1980s is the art of “unofficial” movement, which is the opposition to the Socialist Realism art with its maximum sharply embodied spirit of the times. Avant-garde with no external support could be based only on personal, individual motivation. The art of Siberian artists, as opposed to Western ones, is original, individual, as it existed in isolation from the artistic life of the capital. The works of Siberian avant-garde artists presented in this paper have a general trend: they base their worldviews on the Siberian ethnic group, begin their journey in art with realism, identity, association, symbolism, philosophical reasoning about the world. After analysing the works of Siberian artists of 1960s–1980s, we can say that they laid the foundation for individual creativity in the artistic life of Siberia and Siberian avant-garde is indeed a phenomenon against the background of socialist reality. All these artists (Pozdeev, Gritsyuk, Rybakov, Makeev) are different in the themes of paintings, techniques of execution, in the direction from naive art, abstract surrealism, Romanticism to the avant-garde trance. Their works have no analogues in world art, which suggests the Siberian school of avant-garde and puts their names on a par with the wonderful artists of the twentieth century. The main feature of their works is the ability to translate images of high art complexities and contradictions of the era. Their works are an evidence of acute reflections on the contemporary world, an attempt to break through the established boundaries of the artistic thinking of the time. All this gives a positive outlook for the future development of new generations of painters, a new image of the artistic worldview. The worldview of modern Siberian artists who continue the traditions of Siberian avant-garde is a reflection of this process. Considering Siberian avant-garde as a means of human self-realization, we can talk about its ability to influence the cultural-historical process of the artistic life in Siberia.

**Key words:** avant-garde; socio-cultural environment; Siberian ethnic group; palette; regional identity.

P. 74. *Smokotin Vladimir M.* Tomsk State University. **THE QUEST OF PATHS TO MULTILINGUALISM AND MULTICULTURALISM WITHIN THE FRAMEWORK OF THE EUROCOMPREHENSION CONCEPTION.** The paper is devoted to the peculiarities of the EuroComRom language project developed with the aim to achieve multilingualism on the basis of Romance languages within the framework of the Eurocomprehension conception. Research in the field of European multilingualism on the basis of the three main language families in Europe – Romance, Slav and German, began at the initiative of a group of German linguists in the 90s of the 20th century, and led to the development of a language project that in 1999 received the “European Language Label for an innovative language project”. The most development from the three EuroCom projects was received by the EuroComRom project aimed at achieving multilingualism in the Romance group of languages on the basis of the French language, the most studied language of this group. The project resulted in the publication of a textbook for speakers of the German language and a software product in the form of a multimedia aid. The approach “the Seven Sieves”, which is the result of the completion of the EuroComRom research project, allows achieving receptive multilingual competences in Romance languages. The paper presents an analysis of the main theoretical argumentation about a possibility of developing a multilingual competences in a group of related languages by activating the already existing but unused knowledge, and the peculiarities of the Seven Sieves approach developed within the framework of the Eurocomprehension conception with the chief aim of the Council of Europe language policy, that is, achieving individual plurilingual and pluricultural competences. EuroCom organizes and subdivides the search for and recognizing interlexemes and identical syntactic structures in the studied languages into seven sections, or “seven sieves”, starting with the first sieve sifting out international vocabulary, which is common for most of the European languages. The authors of the seven sieves project state that after a course of multilingual training in acquiring receptive competences in a group of related languages it is expedient to continue studying the given languages with the aim to achieve productive competences. Next, the paper considers other language projects in the field of multilingual education in line with the Eurocomprehension conception, including EuroCom and a number of projects based on other approaches and methodology to achieve plurilingual competence. The main contribution of all these projects to multilingual teaching and learning is in the growth of intercultural and interlingual awareness of the linguistic diversity, rather than acquiring any language skills. Summing up, the paper notes that the quest of ways to European multilingualism and preservation of linguistic and cultural diversity in the process of constructing a multilingual society takes place under the conditions of the growth of the use of the English language as the chief means of common European interlingual and intercultural communication, and a conclusion is made that the domination of English in the globalised world only strengthens the need for measures to preserve national languages and cultures performing the function of the ethnocultural identity, which is possible only in case of purposeful policy of multilingualism.

**Key words:** language project; European multilingualism; plurilingualism.

## HISTORY

P. 78. *Zaytseva Tatiana I.* Tomsk State Pedagogical University. **MAN'S GENDER IDENTITY: THEORETICAL ASPECTS OF RESEARCH.** This article is devoted to the theoretical aspects of the studying of man's gender identity. The quintessence of researches available today is the publications of the leading domestic scientist I.S. Kon. One of the important ideas of the scientist is the thesis about the socio-cultural context of the masculinity formation and the influence the social niche of its carrier has. Gender socialization of the man is connected with the historical process. The specificity of the man's gender identity is especially brightly shown in transient periods. At the same time, besides the historically caused components of the man's gender identity, the researcher singles out the constants of the man's behaviour, the intercultural gender properties – reference in the external world, greater role of man's community, propensity, aggression and others. I.S. Kon's another important position is a thesis according to which in the society there are some types of masculinity. Among the latter, it is possible to point out the prepotent form, representatives of which occupy the social top, and the secondary, alternative forms, less prestigious or marginal. Many researchers agree with Kon's positions in their works. Thus, S.A. Ushakin underlines the patriarchal Judaism-Christian masculinity, the military-civil model of the antique Greece, the medieval form of masculinity with the code of honour and an institute of protection, etc. The researcher also marks that within separate cultures the distinction within sexes are no less significant, than between the sexes; and men who mismatch prepotent specifications, feel social

pressure. E.R. Yarskaya-Smirnova addressing to the problem of the embodiment of social values in a man's body comes to a conclusion about the distinction of masculinity in each culture, the hierarchy inside of the dominating man's culture. It shows the role of physical strength for the formation of the prepotent identity and social marginalisation of men characterized by physical differences from the dominating canon. E.Y. Meshcherkina marks that only life in line with a certain social man's habitus order causes the feeling of "habitus confidence" in men. N.A. Shukhova has analysed the influence of gender identity on men's socio-psychological adaptation. The success of the latter, in the opinion of the researcher, is connected with the conformity of the man to the traditional views and requirements. At the same time, the major component of the current crisis of masculinity set on the boundary of the 21st century is the increased rigidity of the social requirements to men, which made them especially vulnerable in the conditions of the occurring changes.

**Keywords:** man's gender identity; masculinity; gender socialization.

P. 82. *Lukov Yevgeniy V.* Tomsk State University. **THE PROBLEM OF DEFINITION OF THE STATUS OF INTER-REGIONAL ASSOCIATION "SIBERIAN ACCORD" IN EARLY 1990S.** Reforming the political system in our country on the verge of the 1980s and the 1990s led to a transformation of the existing institutes and establishing of new structures. The Inter-regional association of economic interaction of regions "Siberian Accord" became one of them. Standard fastening of its legal status became the major condition for its development and activity. The problem was that the creation of the association became a manifestation of the initiative of the Siberian regions, which originally paid more attention to finding a solution for specific targets within the limits of the created association, instead of its status. In many respects it was a result of economic priorities of the final stage of the "perestroika", focusing regions on transition to independence and self-financing. However, in the conditions of formation of the new Russian statehood an important role was played by formal legal relationships. Power and management levels – federal, regional and municipal ones – were vested with a certain volume of competence. In this connection, the problem of defining the status of inter-regional associations of economic interaction was designated. On the one hand, they had shown the efficiency in achievement of social and economic stabilization in regions; on the other hand, they did not correspond formally to the types of organizations existing in the legislation. Associations required definition of legal bases of their activity. At the end of 1991 attempts were undertaken to give associations the state status, however, the Supreme body of the RSFSR sent the presented documents on completion to The Ministerial Council. As a provisional measure was the presidential Decree, according to which the "Siberian Accord" was established and accepted the Contract of founders and the Charter in July 1992. Despite that, the accepted standard documents did not create a sufficient legal field for the activity of associations. Constantly, there were problems connected with the uncertain status of "Siberian Accord" that did not allow to operatively solve urgent problems within the association. Disintegration processes in the country, which forced the federal centre to be concerned with the suspicion of activity of associations and deprive them of additional powers, aggravated the situation. At the same time the race for power between the President and the Supreme body pushed them getting support of the regions, including associations. In these conditions the Government confirms "Temporary Position on the Order of Formation, Registration and Activity of Voluntary Associations of Economic Interaction". The accepted document reflected the central power's policy of dual nature – the problem of defining the status of associations was not solved, but considerable powers concerning joint conducting the Federal centre and subjects of Federation were conferred to inter-regional associations. Temporary position actually became a legislative basis, within it the activity of association before passing the Federal Law in 1999 was carried out.

**Key words:** "Siberian Accord"; status of inter-regional association; regionalism; Regional Study; Russia.

P. 88. *Mukaeva Larisa N.* Tomsk State University. **EXPLORATION OF THE EASTERN PART OF GORNY ALTAI (THE BIYA AND TELETSKOE LAKE) BY G.P. VON HELMERSEN IN 1834.** The article is devoted to the geological expedition of the famous Russian scientist and traveller G.P. Helmersen in the eastern part of Gorny Altai in 1834. The aim of the journey was to study the geological structure of Teletskoe Lake and the adjacent territories. One of Helmersen's research tasks was to ascertain the gold content of Teletskoe Lake and its inflows. The article underlines that the expedition was initiated by the Ministry of Finance of Russia, which was interested in the scientific research of the district and discovery of precious metals supplies in its territory. The work gives a detailed description of the journey route, which included all the Biya water area, Teletskoe Lake and the low part of the Chulyshman River, where Helmersen turned back. The article underlines the geological significance of Helmersen's journey to Eastern Altai, because he was the first scientist to visit the Altai Mountains, Teletskoe Lake and the Biya River and discovered this "terra incognita" for the scientific world. Helmersen studied the composition of rocks, compiled a detailed description of the mountains surrounding the lake, and studied the main inflow feeding the lake – the Chulyshman River and its role in filling the lake. The results of Helmersen's research were the first authentic scientific picture of the geological structure of the Biya River and Teletskoe Lake basins and the first geological map of the district, which was used by other researchers who visited Gorny Altai and cabinet geologists who investigated the lakesides and inflows of the lake. Helmersen gave a general geology and mineralogy description of the Teletskoe Lake district and its inflows and detailed mineralogy component description of rocks of the surrounding mountain ridges. Helmersen's geological research held in 1834 prepared the discovery of gold in Gorny Altai in the second part of the 19th century. The article reveals the significance of Helmersen's work as important historical sources in history and culture of the Russian population of Piedmont Altai and the Altaians populating the basin of the upper Biya and Teletskoe Lake in the first third of the 19th century. The scientist's information about attempts to develop economically the nature sources by the West-Siberian administration is of great interest. Long before V.I. Verbitsky, G.P. Helmersen had written down some Altai legends about the sacral places of the Teletsky district. Thus, G.P. Helmersen played a great role in investigation of natural resources of Eastern Altai. The expedition of 1834 started the scientific research of this part of Altai. Helmersen's works promoted the mining development of this part of Altai.

**Key words:** G.P. von Helmersen; Altai; geological expedition.

P. 94. *Panchenko Aleksey B.* Surgut State Pedagogical University. **ETHNOGENETIC PROBLEMATICS IN THE DOMESTIC SCIENCE ON PEOPLES OF LATE 19 – EARLY 20 CENTURIES.** The problem of peoples' origin and development is one of the most discussed in the Russian humanities. The term "ethnogenesis" began to be actively used in science in 1950–1960. Formation of the ethnogenesis theory occurred at the same time as formation of the domestic ethnography; though the first versions explaining various peoples' origin with the support of the bible tradition appeared some centuries earlier. Questions of peoples' origin in the academic discourse were raised by V.N. Tatishchev, further they were developed in M.V. Lomonosov's and N.Y. Bichurin's works. Since the second half of the 19th century questions of ethnogenesis and ethnic history have strongly occupied one of the major places in domestic humanities. At that time three methods of research were most widespread: derivation to the ancestor; correlation of modern and ancient

peoples; “ancestral home” search. Addressing to the problems of Russian people’s origin, the researchers involved data of physical anthropology, archaeology, and linguistics. At the beginning of the 20th century Russian ethnography turned to system analysis to solve the problems of ethnogenesis. Among the first was an outstanding researcher of the Far East – S.M. Shirokogorov, who considered ethnos as a live organism, which is born, lives and dies. Without using the term “ethnogenesis”, he distinguished two processes – formation of a new ethnos and its changes. For the first time he offered to distinguish ethnogenic processes and ethnic history. Ethnos change occurred in the ethnic environment change. During the same period the ethnogenesis problem was developed by the researchers’ circle in the European centres of science. In 1920s–1930s in Prague, Vienna, Paris, a movement of Eurasians was formed. The exhaustive development of the concept of Russian ethnogenesis was reached in G.V. Vernadsky’s works. Marking the futility of search for “ancestral home”, or “parent language”, the researcher offered a complex approach – with attraction of data of linguistics, physical anthropology, archaeology and geography. Based on the Eurasian perception that a symphonic person represents not an agglomerate of individual subjects, but their concordance (symphony), Eurasians considered that the origin of a new ethnos occurred during the global dialogue by means of language, history, institutes and customs. In the Soviet science the ethnogenesis problem became topical on the boundary of the 1940s–1950s when S.A. Tokarev and N.N. Cheboksarov published their article *Methodology of Ethnogenetic Researches Based on Data of Ethnography in the Light of I.V. Stalin’s Works on Linguistics*. Continuing the traditions of the domestic and European ethnographic science, Russian researchers have formulated principles of a complex studying of ethnogenesis problems and ethnic history with the use of data of various sciences, cartographical methods and the comparative analysis of language and cultural realities.

**Key words:** ethnogenesis; history of science; S.M. Shirokogorov; Eurasianism.

P. 98. *Sarycheva Tatiana V.* Tomsk State Pedagogical University. **FOUNDATION HISTORY OF PHYSICAL CULTURE INSTITUTIONS IN TOMSK PROVINCE (LATE 19 – EARLY 20 CENTURIES).** The state level issue of physical culture and physical education on a large scale was not discussed in practice in pre-revolutionary Russia. The forward-looking intelligentsia initiated sports and physical culture institutions, but only several of them were granted an official status. The first optional sport societies in Tomsk were established back in the 1890s. There were three “sports” institutions at that time, but two of them had nothing in common with physical culture. All the work related to the P.E. was implemented under the public institution auspices, called “Physical Culture Enhancement Society”. It was set up by a public figure, Dr. V.S. Pirusskiy in 1895. Apart from the above-mentioned society, several physical culture clubs were created in early 20th century, that encouraged the youth to join sports clubs and the first enthusiasts of physical culture movement appeared. By 1913 the following sports had risen in Tomsk: gymnastics, skiing, skating, football, swimming, tennis, chess, etc., also the first sports events were held then. Alongside with sports activities some certain kinds of folk exercises and contests were still popular. The revolutionary events of 1917 ceased the city’s sports life for a while, it resumed in 1918. Some foreign prisoners of war came to Tomsk, among those were the participants of the Olympiad VI of 1912. It was a prerequisite for the arranging of the contests called “The Olympic Games”. A highlighting sports show triggered a genuine interest in physical culture and enhanced the increase in number of Tomsk physical culturists. Besides, a professional sport promoted to some extent the involvement of young people into taking exercises. During the pre-revolutionary period first Strepetov’s and later Izako’s circuses were functioning, and wrestling championships with famous fighters were held. The bottom line of physical culture development in the pre-revolutionary period was the emergence of a certain amount of enthusiasts, organizers, instructors on various sports and a material base as well. That attracted attention of city dwellers and served as a prerequisite to the physical movement development in the Soviet Union.

**Key words:** physical culture; “Physical Culture Enhancement Society”; pre-revolutionary sport.

P. 101. *Solovenko Igor S.* Urga Technological Institute of National Research Tomsk Polytechnic University. **PARTICIPATION OF KUZBAS MINERS IN RUSSIAN “RAILWAY WARS” IN 1998.** One of the most dramatic periods in the protest movement of Kuzbas miners when passing to the market economy is shown. Reasons, goals and results of participation of Kuzbas people in All-Russian protest action of miners are described. Inability of federal authority to solve essential problems of the majority of population provoked the All-Russian protest action in May, 1998. It was called the “railway war”. During May a days-long blockade of railway communications between Moscow and Vorkuta, central and southern Russian regions, and also in the middle part of the Trans-Siberian Railway was conducted. This action became an apogee of workers’ struggle for their economic rights when passing to the market economy. Miners took the lead in “railway wars”. “Railway opposition” in Kuzbas lasted 27 days and was the most powerful, radical and consistent against the background of other protest action sites in the country. Miners demanded resignation of the RF President, nationalization of coal-mining industry, stopping of closing enterprises without preliminary establishment of work places, paying off arrears of wages, etc. The majority of region residents supported picketers’ demands, but not everybody agreed with the protest form, considering it far too radical. The Trans-Siberian Railway on the territory of Kuzbas was blocked twice – in May and July, because paying off arrears of wages did not occur in time. The conflict was settled due to cooperation of the federal and regional authorities. Members of the governmental committee promised miners to satisfy the demands on improvement of the social-economical situation in Kuzbas. A lot was done in summer, but August default and replacement of the RF Government did not allow meeting all obligations in time. Participation of Kuzbas miners in All-Russian “railway wars” in 1998 showed the efficiency of this form of protest. But the main goal, resignation of the RF President B. Yeltsin, was not reached because of the peripheral location of the region and absence of a strong political organization, which could lead miners protest action of all coal-mining regions in the country. The economic price of such efficiency was very high.

**Key words:** Kuzbas; “shock therapy”; miners; “railway wars”.

P. 107. *Sorokin Aleksandr N.* Tomsk State University **SIBERIAN PHYSICAL-TECHNICAL INSTITUTE AND ITS CONTRIBUTION TO SCIENTIFIC POTENTIAL OF SIBERIA IN 1920S–1941.** The article is devoted to the first scientific research institute in the east of the country in the field of exact and engineering sciences. The author reveals principal causes of establishing the institute, the purpose and the activity problem, the personnel structure. The author defines the contribution of scientific achievements of SPhTI to the scientific potential of Siberia. The institute was established due to historical preconditions. The necessity of radical modernization of industry and the country’s entry to new technological boundaries in the 1920s demanded expansion of the peripheral network of scientific institutions working in the area of physics. Vladimir Dmitrievich Kuznetsov (1887–1963) played a huge role in the formation and organization of the Siberian Physical-Technical Institute. The idea of establishing a physical-technical institute in Tomsk matured in 1925, coinciding in time with plans developed by academician A.F. Ioffe. V.D. Kuznetsov’s personal acquaintance with the leading scientists-physicists of the country became an important factor, which accelerated the process of advancement of the question on institute creation in Tomsk. He began correspondence with Leningrad scientists: A.F. Ioffe’s academicians, P.P. Lazarev,

professor N.N. Semenov, corresponding member of the USSR Academy of Science Ya.I. Frenkel, future academician of the USSR AC and winner of the Stalin award N.N. Davidenkov, professors, future employees of SPhTI, P.S. Tartakovsky and M.I. Usanovich and others. The author reveals the basic scientific directions of the Siberian Physical-Technical Institute: solid-state physics, physics of electromagnetic oscillation and spectroscopy. On the basis of these directions, schools of thought were generated; researches, which brought a considerable contribution to the scientific potential, were conducted. The institute's activity had a close connection between science and manufacture, which essentially accelerated practical application of the scientific results. SPhTI dynamically communicated with economic and public organizations, rendering daily help to a number of establishments and enterprises of Tomsk (Tomsk Electromechanical Factory, Clinics of Tomsk Medical Institute, military organizations, etc.). The significant scientific results reached in SPhTI allowed it to become an authoritative scientific institution at that time. The institute has gradually turned into the centre of science of development of physics and physical researches, the centre of preparation of highly skilled personnel and popularisation of physical knowledge.

**Key words:** physical science; Siberia; scientific potential; industrialization.

P. 111. *Khaminov Dmitriy V.* Tomsk State University. **HISTORICAL SCIENCE IN SIBERIA AND ORGANIZATION OF SIBERIA STUDIES DURING THE REVOLUTION, CIVIL WAR AND FIRST YEARS OF THE SOVIET POWER (1917–MIDDLE 1920S).** In the crisis periods of socio-political transformation of the Russian society, the professional historical science, as any other branch of humanitarian knowledge, always appeared in a dual position. On the one hand, at this time new possibilities opened for its further development, on the other hand, history as a specific humanity should constantly answer to calls of the new time. In the paper the question of features of development of professional historical researches, including those studying Siberia, on the territory of Western and Eastern Siberia during the Revolution, the Civil War and the first years of the Soviet power is complexly considered for the first time. During the pre-revolutionary period the central and regional public authorities and the Siberian public undertook active attempts to organize its own large centre of historical science in Siberia. So, departments of the Imperial Russian Geographical Society in Irkutsk and Omsk were opened. During this period employees and professors of Imperial Tomsk University conducted historical and regional Siberian studies by their own initiative. However, until the beginning of the Civil War all-Siberia coordination centres of historical science were not established. Only in 1917–1918 in Tomsk and Irkutsk universities Departments of History and Philology were opened with professional historians, whose function was coordination of the historical scientific life of Siberia. At the same time, by the decision of the All-Russia government of Admiral A.V. Kolchak the Institute of Research of Siberia was organized, which was to become the coordinating centre of all scientific researches in Siberia, including regional studies. After the establishment of the Soviet power on the territory of Siberia, the Institute of Research of Siberia and Departments of History and Philology of the Siberian universities were closed. The policy of the Bolsheviks in the first half of the 1920s put an end to attempts of the Siberian public to create an effective system of their own large centre of Siberian historical science and coordination of regional studies. Siberian historians were alienated. It led to losses of potential possibilities of Siberian researchers in carrying out of the general complex study of Siberia and other researches. Only after the war, with restoration of historical departments in Tomsk and Irkutsk universities (in 1960s Novosibirsk university joined them), the situation started to change. Universities began to gain significance as the centres of coordination of historical researches. The result of such activity and associated efforts of Siberian historians was publishing of some fundamental multivolume works in the 1960s – 1980s, such as “History of Siberia”, “History of Peasantry of Siberia” and “History of Working Class of Siberia”.

**Key words:** Siberia; historical science; Civil war; Soviet power.

## LAW

P. 117. *Rukavishnikov Yevgeniy A.* Tomsk Branch of Kuzbas Institute of Federal Penal Service of the Russian Federation. **ON DIFFERENTIATION OF CRIMINAL RESPONSIBILITY BY ARTICLE 118 OF THE CRIMINAL CODE OF THE RUSSIAN FEDERATION.** The article presents statistical data on cases brought under Article 118 of the Criminal Code of the Russian Federation. A negative trend is noted: with the general reduction of the number of committed crimes, there is a specific growth of negligent infliction of serious harm to health. The article describes proposals existing in criminal law science for aggravation of penalty for careless infliction of grave harm to health. It is noted that the victim by Part 1 of Article 118 of the Criminal Code of the Russian Federation is not often interested in the appointment of a penalty of imprisonment (in some cases this may satisfy his desire to take revenge, but it will bring him nothing in material terms). More often the victim sees satisfaction in real and timely opportunities to compensate for the damage caused by the crime in full. Therefore, the most preferred alternative types of punishment not connected with isolation from the society, which allow the accused to compensate for the caused damage in the normal conditions of his life. The current sanction of Article 118 of the Criminal Code provides for the possibility to appoint one of the five types of punishment: a fine, compulsory works, corrective works, restriction of freedom as an alternative punishment, not connected with isolation from the society, and arrest as a measure of punishment alternative to imprisonment. However, there are more alternatives of possible punishments de jure than de facto. So far courts have not considered arrest as a form of punishment, and restriction of liberty was introduced in the Criminal Code of the Russian Federation only on January 10, 2010. In practice, courts appoint fines, compulsory and correctional works. In this case, from 2005 to 2010 fine as a penalty on the territory of Tomsk region was appointed only in 10.3% of the criminal cases studied under Art. 118 of the Criminal Code. Compulsory work was appointed in 24.1% of cases, corrective works – in 27.6% of cases. The criminological description of the personality of the convicted person under Art. 118 of the Criminal Code is given, which is mainly characterized by its positive image, lack of criminal record and situational nature of the perpetration of a crime. The fact is emphasised that for the period from 2005 to 2010, on the territory of Tomsk region crimes with the careless infliction of grave harm to health there was not a single case of a repeated committing of the crime, which testifies to the effective implementation of the preventive role of sanctions of Article 118 of the Criminal Code. It is concluded that the application of the penalty of deprivation of liberty is inexpedient; and there are no objective prerequisites for the preservation of a special form of criminal liability for the careless infliction of grave harm to health owing to inadequate execution of professional duties. At the same time there is a need for criminalization within Part 2 of Art. 118 of the Criminal Code of the Russian Federation of such an act as careless infliction of grave harm to health to two and more persons.

**Key words:** punishment; subject of crime; criminological characteristics of offender.

P. 120. *Bakhman Anzhela R.* Tomsk State University. **ON URGENCY OF CREATION OF THE CHILDREN'S CODE IN RUSSIA.** Objective laws of life of all humankind define formation of the personality of the child; and the state always acts as the guarantor of the rights of the child. At present, in Russia the legal status of the personality of the child needs an interstate legal mechanism of maintenance and protection. To achieve it, it is necessary to develop a system of norms of the internal right, which would have real possibility of providing a complex of legal, social and economic guarantees for minors. The historical aspect of studying of the specified problem in the complex consideration of the problems of the family law deserves steadfast attention. Studying legal problems in the family and childhood sphere will allow offering constructive decisions. It is necessary to use the potential of the Russian and international law. And it is necessary to consider the category of the legal status of the child in the Russian Federation from positions of the theoretical approach, marking the priority of the international law at formation of a legal policy in the field of protection of motherhood, paternity and the childhood by the state. The analysis and use of scientific knowledge of the previous generations is a starting point for movement further. Carrying out reforms is urgent in the field of law when the state and the society have a severe need in the new knowledge allowing more precisely to regulate the relations in the sphere of protection of rights and interests of the child. Certainly, creation and formation of The Children's Code should start from the operating Russian legislation and realities of our society, which will undoubtedly demand certain time. But before discussion on the variety of questions, it is necessary to state the place of the future Children's code in the system of the Russian legislation, and also in the system of the family legislation, in particular its parity with the Family Code; the structure and content of this document. It is possible to assume that it will be a complex statutory act containing general and special parts. It should not duplicate the known norms of the aforementioned codes and other regulatory legal acts. It should focus on the minor citizen as a bearer of a special legal status. For this purpose the following should be done: 1. Study and generalization of the legislation and legal literature, which is available on the problem of the legal status of the minor during the various periods of the Russian history; 2. Study of history of development of protection of the rights and legitimate interests of children in Russia; 3. Definition of the place and degree of use of international experience in sphere of the protection of the rights of the child in the Russian legislation. Thus, it is necessary to pay special attention to the conventional principles and norms of international law, as a basis of development of the domestic legislation on children. It is very important to specify and, probably, enrich the conceptual devices of the branch of the family law.

**Key words:** civil-law status of the minor; legislation on children; Children's Code; interests of child; family legislation.

P. 123. *Gradusova Marina M.* Department of the Secretariat by the Governor of the Altai region (Barnaul). **ETHNORELIGIOUS TERRORISM: CRIMINAL ANALYSIS OF CRIME MOTIVATION.** Ethnoreligious terrorism has now become widely spread in the world. It is possible to assign special motives of participants of terrorist actions to criminological features of ethnoreligious terrorism. Committing a crime the person realizes the social and international danger of the act, expects and desires a certain criminal result. Thus, the correct estimation of any behaviour, including the criminal one, is impossible without understanding its motives and purposes. The motive and purpose are mental phenomena, which, combined with the fault, are the subjective part of a crime. The problem of the analysis of the motive of criminal activity is most delicate and difficult. In this case the researcher should face consideration of religious and ethnic factors of the criminal characteristics of a criminal-terrorist or a criminal group. European researchers subjectively describe the person of terrorists in Islamic radical groups representing them as egocentrics and psychopaths. Actually, they are globalised young men who identify themselves with the virtual and imagined Muslim umma. They move from one venue of jihad to another, they visit preparation camps. They never refer to traditions or traditional Islam. In preparation camps young insurgents learn only those fragments of the Koran where it is told about the struggle with the infidels and voluntary martyr death for faith. Radical lawyers publish instructions based on the Koran and Sheriyat to justify terror. Therefore, the first motive for the Mojahedins who are terrorists is the conviction that all their actions are legal from the point of view of Islam. The second significant motive for acts of terrorism in radical groups is the corporate approval of terror reached by the oath for fidelity – “bayat”. According to the legal substantiation of jihad all the Muslims who are going to battle, should swear the fidelity oath to their political or military leaders. According to the author, arguments of permission of terror from the position of religion and its approval by the terrorist corporation are the basic motives of terrorist activity for the members of Islamic radical associations.

**Key words:** ethnoreligious terrorism; fiqh of jihad; bayat.

P. 129. *Knyazkov Aleksey S.* Tomsk State University. **FEATURES AND SYSTEM OF INVESTIGATIVE ACTIONS.** Close contact of tactical-criminalistic measures of investigation of a crime and investigative action makes questions of essence and features of investigative action, their system and types extremely topical. Despite the fact that these questions found reflection in works of famous scientists, nowadays, investigative action is one of the notions, which is still being discussed. In this article, different approaches to criteria of separation of investigative actions from criminal proceeding actions are described, in particular, broad and constricted versions of investigative actions. It is noted that for constricted versions different points of views on the essence of investigative action have been formed; it leads to naming different numbers of investigative actions. It is connected with the fact that operation of a single distinctive feature of an investigative action – its cognitive character – does not allow a strict definition of a system of investigative actions. As a criterion of an investigative action a possibility of any criminal proceeding action itself is proposed, by means of applying cognitive methods to it in order to find or check the evidence. In other words, an investigative action has a particular feature of direct influence on a material object with an aim of deriving evidentiary information. The existing discussions about attribution of any criminal proceeding action to the investigative one are caused by the fact that legislator does not always point out the purpose of its applying; or instead of purpose, he names conditions, when it is possible to conduct this action, for instance, face-to-face interrogation. The author is strict in the view of attribution of such actions as apprehension of a suspect, reception of samples for comparative research, control and recording of conversations, exhumation, reception of information about connection of telephone subscribers or devices to investigative actions. All these actions have organizational, ensuring execution character of such actions as personal search, view of corpse, documentation view, prescription or forensic expertise. Ch. 24–27 of the Criminal Proceeding Code of the Russian Federation has data on executive and efficient, securing character of some criminal proceeding actions, and special instructions, which regulate application of such actions to such an investigative action as examination. Examination is held immediately after securing proceeding actions. It allows getting evidence as a result (P. 1 Art. 186 of the Criminal Proceeding Code of the Russian Federation). Consequently, when the definition of an investigative action is given, it is necessary to say that it is a criminal proceeding action, executing of which directly, without production of any other investigative action, allows achieving new evidence or checking the already existing one.

**Key words:** criminal proceeding action; investigative action; cognitive activity; control of investigative process; system and classification of investigative action.

P. 134. *Melikhov Sergey Yu.* Public Prosecutor's Office of the Tomsk region. **PRINCIPLES OF CRIMINALIZATION OF ADMINISTRATIVE NEGLIGENCE IN ORGANIZATIONS.** Negligence in organizations corresponds to main principles of criminalization. Besides being a sign of public danger, impossible to counteract by the existing norms of law, it is spread enough and is not individual or universal. Bodies of criminal justice possess material and remedial possibilities to carry out criminal prosecution for fulfilment of these acts. They have experience and skills of struggle against crimes from Ch. 23 of the Criminal Code of the Russian Federation. Revealing and investigation of negligent acts in organizations is not particularly difficult in cases of scale consequences or a trespass to the third parties, which are interested in overcoming their latent character. Negative consequences of this criminalization will not exceed the positive ones. Positive consequences will make real restoration of social justice by bringing the guilty to responsibility for fulfilment of socially dangerous acts, which remain unpunished today. Fears of unreasonable intervention of law enforcement bodies in the activity of businessmen are connected with application of rules of law on economic crimes, instead of crimes at official services to relations between them. Negligence in organizations concerns the latter. A competently formulated structure of the given crime will be a guarantee against abuses of governmental structures. Criminalization of negligence of managers in organizations corresponds to the Constitutional principles of equal protection of all forms of ownership, principles of judicial protection of the rights and freedom of citizens, and also the rights of victims of crimes. It is not directed at strengthening the atrocity of a criminal penalty, but at inevitability of responsibility for socially dangerous acts. Despite liberalization of the criminal legislation, establishment of such a criminal interdiction will not contradict the general directions of the criminal policy as heads of the state are guided by humanization, as well as by an intention to give real protection of the rights and interests of victims of crimes, adequacy of criminal penalty to criminal conduct, restoration of equity by means of justice. Negligent acts of managers causing harm to life, health, large material damage, are publicly condemned and generate adequate measures of criminal sanction in all cases. Major incidents of recent time entailing victims and destruction support the public mood, which does not accept negligence as such. Therefore, the level of sense of justice of the population allows taking criminalization of negligence of managers in organizations for granted.

**Key words:** criminal interdiction; criminalization of socially dangerous acts; administrative negligence.

P. 138. *Prozumentov Lev M.* Tomsk State University. **CRIMINAL ASSOCIATION AS FORM OF COMPLICITY IN CRIME.** Criminal association (criminal organization) is the most dangerous kind of complicity with beforehand agreement. Danger of this kind of complicity is conditioned not only by the quantitative feature but also by (to a great extent) the character of the crimes committed by criminal association. Results of social studies and court practice researches show that nowadays the goals of criminal associations are drug business, crimes against property and persons. During a long period of time a criminal association (criminal organization) was defined in the Russian criminal law as a cohered organized group (organization) created to commit serious crimes; or a union of organized groups created with the same goals. Analysing this form of complicity in crime researches noted its double nature. It means that by the law we can call a criminal association (criminal organization) both (a) a cohered organized group (organization) created to commit serious crimes and (b) a union of organized groups created to commit serious crimes. The main characteristics of a criminal association (criminal organization) were the following: "group of persons", "beforehand organized group", "cohered group", "group created to commit serious crimes". Authors noticed that a criminal association had many qualities common with an organized group. At the same time a criminal association also had many differences with it (e.g. criminal association should be cohered and aimed at committing serious crimes). In the researchers' opinion cohesion was an evaluating term. So it was important to single out the basic characteristics of this term. Approaches of defining these characteristics existing in the Criminal Law are analysed in the article. On November 3, 2009 changes were made in Part 4 Art. 35 of the Russian Criminal Code. Since this date a criminal association is determining as an organized, structured group or a union of organized groups that operate under one leader; members of these groups are consolidated for joint committing of one or several serious crimes, for direct or indirect financial or another profit. All these legal characteristics of a criminal association are analysed in the article. The author questions the expediency of some characteristics.

**Key words:** criminal group; organized criminal group; structure; crime; leadership.

## ECONOMICS

P. 143. *Akopova Yelena S., Vanyushkina Vera V.* Rostov State Economic University. **BRAND AS A COMPONENT OF UNIVERSITY'S INFORMATIONAL CONTOUR.** Active Russian inclusion in the world economic system causes the necessity to increase the competitive positions of domestic universities that in turn mostly depends on perfection of their marketing activity, including formation and development of branding. The success of work of a higher educational institution is predetermined by a coordination of activity of all its structural divisions aimed at a joint search of the most effective decisions based on marketing principles. In university activities the concept of branding combines the commercial and social components of a marketing policy of creation of long-term consumer preference to this or that university. Recently, Russian higher educational institutions all address in the activity to the concept of branding from the perspective of enhancing the prestige of the University. The analysis of brands of Russian universities is based on the estimation of tendencies of development of the education system. As a result of the realized analysis it has been established that the brand of the university has the specific foreshortening caused by influence of factor groups. Among them we can allocate such factors as increasing of globalisation and international competition in the higher education market, an active position of the state and orientation on increasing of innovative potential of universities. The information contour of the university is predetermined by its brand. Marketing researches allow correlating more precisely theoretical and empirical levels within the limits of the theory of branding, systematizing empirical results, orienting them to the verification and the development of theoretical propositions step by step. In the economic-organizational plan the education system is an adequate economic-political system. It finds reflection in the university policy of branding. Productivity increase of branding in many respects is based on information openness of the educational process and clearness of interaction of all its participants, including the state. And the best indicators of the university are in many respects caused by professionalism in the sphere of branding. It is necessary to make active social-ethical orientation of the brand of the university. It will allow changing the traditional relation to knowledge. Knowledge is the goods, which has both the cost and the value. The brand provides an

active feedback with the environment to the university and creates preconditions for realization of correction of qualitative parameters of the educational process – of improvement of quality of training of specialists and their specialization.

**Key words:** brand; marketing researches; information system of university; branch theory of branding.

P. 146. *Dunaev Oleg N., Nesterova Daria V.* Financial University under the Government of the Russian Federation; National Research University Higher School of Economics (Moscow). **ON ORGANIZATION INNOVATIVE MANAGEMENT CONCEPT.** Analysis of the evolution of theoretical approaches on the nature and content of organization management has shown an important role of the classic, evolutionary, behavioural, institutional and strategic theories for the concept of innovation management development. A special place within these theoretical views belongs to the entrepreneurial approach (by P. Drucker), which is combining innovation and entrepreneurship in one “technology management” – entrepreneurial management. The conclusion has been made that up to now the concept of innovative management is under development. It has not yet become part of strategic management. The approach to innovative management existing in the Russian modern economic literature considers it only as a single (specific) function – as management of innovations. Accordingly, the implementation of this function directed to development and implementation of a type of innovation – product, technological, organizational, and marketing and others. Such a narrow view on management of innovations (as a single function) makes the content of innovative management scanty like entrepreneurial management. At the same time this narrow view does not correlate to the new format of the innovation process where researches are only a part of the whole project and the main focus is displaced to demand forming, chain supply construction, clients' network creation. The conclusion has been made that there is a need for a broader view on the innovative management of organization like entrepreneurial management, for which a set of microeconomic factors: strategy and strategic control, organizational capital, financial resources, is necessary. Organization's strategy has two principal functions: to overcome the technological and market uncertainty. To perform these functions strategic control over resources by top managers and a system of incentives for innovative investment are required. Organizational capital for innovation exists in the form of functional and hierarchical integration of personnel; the system of incentives and remuneration methods generate collective learning. Strategy and strategic control, organizational capital and financial resources are closely linked in a dynamic process that is resulted in an innovation. This link is provided and supported by innovative management. The paper argues a broader view on the innovative management of organization as an interactive activity based on the feedback interactions (signalling management) and aimed at creating new competitive advantages within a firm/organization due to microeconomic factors. Combining and matching of these factors provide for an organization its competitive advantages due to competition in innovations. As a result, the organization is able to get Schumpeter's rent. Based on this approach some principles for innovative management concept development are declared in the paper.

**Key words:** innovative management; concept of innovative management; microeconomic factors for innovative management.

P. 153. *Mikhalev Yevgeniy O.* Omsk State Pedagogical University. **PREREQUISITES AND INSTRUMENTS FOR NETWORK ORGANIZATIONAL STRUCTURES FORMATION.** The article consider prerequisites and capabilities for the formation of network organizational structures, which enclosed in factors of external environment of the organization: presence of market for the out-source services, level of management technologies, level of informational technologies and production technologies, availability of labour, environmental situation, government influence. Each of these factors is considered as a prerequisite for the changing of the organizational structure or as a capability. Under the capability the author understands the factors, which give the ability for the organization to solve the problems with changes in their organizational structure. Under the prerequisite he understands the factors, which give problems to the organization, which can be solved by changing the organizational structure with the condition of the existence of factors, which give abilities for such changes. Particular attention is paid to outsourcing as the main instrument in the formation of network organizational structures. Its types are analysed as considered by various authors, the author's classification is given: outsourcing of processes, outsourcing of functions, outsourcing of personnel (outstaffing). The author's definition of the term “outsourcing” is suggested from the point of the organizational structure and with the given species. The levels and the opportunities of the factors are described necessary for the practical use of outsourcing: theoretical level of outsourcing, VoIP, videoconference, group support systems, tender offers regulating law, outsourcing marketplaces, electronic commerce systems. The advantages of the transition to network organizational structures are described using outsourcing, which encloses, first of all, flexible management of production outlay. The latter is considered in the ability to decrease the variable and the fixed outlay, converting outlays from variable to fixed and vice versa. A conclusion is made that at present there are all prerequisites and capabilities for the transition to network organizational structures. The main instrument for such transition is outsourcing, which enables flexible management of production outlay.

**Key words:** organization; network organizational structures; outsourcing; production outlay.

P. 157. *Myrzin Konstantin S.* Tomsk Branch of International Academy of Exchange Trade. **TERMINOLOGICAL APPROACHES TO DEFINITION OF FOREX.** The article is devoted to the modern approaches to definition of Forex. The author carries out the critical review of the basic definitions of the currency market both in the domestic monographies and scientific works, and foreign references. The problem of absence of a uniform definition Forex is revealed. The purpose of the paper is the development of a unified approach to the definition of the currency market. The advantage of many foreign works is the equivalence of concepts Forex and currency market. According to the opinion of the majority of the authors, Forex (FOReign EXchange Market) is defined as the largest financial market in the world, where the simultaneous purchase of one currency and sale of another is carried out. The same approach exists in domestic scientific works. For example, professor L.N. Krasavina defines currency markets as official centres, where the sale and purchase of foreign currencies by the national one at the rate, developed on the basis of supply and demand. In our opinion, the given definition reflects the essence of Forex most precisely. The advantages of this definition are the identity of the concepts Forex and currency market, attention to the official place of fulfilment of bargains, and the principle of formation of the rate of bargains in the currency market. The problem of the definition is the absence of mentioning of the participants of Forex. In the author's opinion, it is necessary to state them in the definition, for in some domestic works the circle of the participants of currency markets is groundlessly limited only to banks. Another extreme of some domestic works is an excessively broad understanding of the currency market. In one case, besides conversion operations, the currency market is attributed with credit operations in foreign currencies, which, in our opinion, are more logical for the sphere of the money market. In another case, Forex tools are described not only in terms of foreign currencies, but also securities in foreign currency, which again sooner belongs to the sphere of the market of securities with all its specific features. In several domestic works the narrow treatment of the currency market including only its world or international segment is used. In opinion of

the author, there is a necessity of allocation of the world, regional and local segments of the market. Taking into account the stated, we offer the following definition: currency market (Forex) is a market of sale and purchase of currencies at official centres at the rate generated on the basis of supply and demand between its participants. The given definition characterizes the specific features of this kind of the market most precisely.

**Key words:** Forex; currency market; currency; currency rate.

P. 160. *Reutov Anatoliy Yu.* Surgut State University of KHMAO-UGRA. **PRACTICAL INTERPRETATION OF QUANTITATIVE EVALUATION OF COMPANY'S INNOVATION ACTIVITY.** The present article contains the author's interpretation of quantitative values of key components of company's innovative activity. The composite notion of innovative activity is analysed in the introductory part of the article. The author provides his own definition of innovative activity, which takes into account the composite nature of the strategic characteristic in question. Thereafter, the key blocks of the author's methodology for integral evaluation of innovative activity are outlined, each block being devoted to assess a corresponding component of innovative activity: resource, resultant and statistical ones. The core part of the article contains the author's interpretations of innovative activity components' values including quantitative and qualitative subcomponents of the resource component, the resultant and statistical components as well as the integral value for organization's innovative activity. Levels of quantitative and qualitative subcomponents of innovative activity resource component are suggested to be seen as a basis for a decision on company's innovative strategy. A 2x2 matrix is used in order to structure innovative strategies with respect to the levels of quantitative and qualitative resources required for their effective realization. Furthermore, the author suggests to group companies based on values of their resource and resultant innovative activity components, each group disposing a unique set of characteristics of innovation activity and specific ways to increase its effectiveness. Assessment of the statistical component of innovative activity allows formal consideration of an organization as innovatively active or passive depending on the level of compliance with specific requirements. The integral value of company's innovative activity is suggested to be illustrated with the help of a radar chart, reflecting the significance of values of its components. The chart clearly and informatively displays the performance of organization's innovative activity. As a bottom line, the author summarizes the possibilities presented by consistent evaluation and interpretation of innovative activity including: monitoring of level of resources required for innovative activity as well as ways of increasing its effectiveness; serving a basis for decision-making on innovative strategy which can be effectively realized by the company; formal division of companies into innovatively active and passive (with respect to the level of compliance with certain criteria); displaying level of balance between innovative activity components.

**Key words:** innovative activity; quantitative value of innovative activity; innovative strategy; resources and results of innovative activity.

P. 164. *Shcherbakova Ludmila N., Shcherbakov Aleksandr I.* Kemerovo State University, Kuzbass Institute of Economics and Law. **REVIVAL OF THEORY OF PRODUCTION IN MODERN CONDITIONS.** The modern understanding of the problem of economic growth does not consist in search of sources of growth, which most works on the given problem are devoted to. Global economic, environmental problems the world economy and humankind face as a whole compels economic thought to reconsider its views on most problems, including the attitude to the real sector of economy, to the forgotten concept of production. The growth of the financial sector, the world financial crisis of recent years are the reminders that it is impossible to consider manufacture only as a "black" box, it is impossible to ignore the importance of this category only because in the Marxist concept it was the major relation of production. Besides, the growth of new structural elements of production, such as, for example, production of information products or educational services, occurrence of essentially new factors of manufacture on this basis, basically demands the problem revision. At present the Russian economy, which underwent transformation to a new system, made it through the financial crisis, faces the problem of definition of the further variant of its development. The role of the production sector in new economy derives from the new understanding of its essence. The works of well-known economists K. Marx, A. Marshall, A. Smith, D. Keynes are devoted to the problem of manufacture, reproduction, productive and unproductive work. The given authors laid the foundation for understanding of these questions, generated various approaches to the estimation of the role of production. The two different approaches, in turn, follow two different courses: political economy of Marxism and economics. In the literature of the Soviet period much attention was paid to production; economics dealt with this question indirectly, among other themes. In the Russian literature of the transition period, especially after the financial crisis, the question on the necessity of returning to this problem is raised as, for example, in the works by V. Korniakov, S. Gubanov, V. Ivanter, V. Maevsky, V.A. Medvedev. The object of the research is modern reproduction, the changes in the structure of the production sector as a real sector of modern economy. The theoretical and methodological basis of research is works of foreign and domestic experts in the field of manufacture, reproduction, balance on macro- and micro-levels. In the work methods of marginal, logic and dialectic analyses have been used. The most essential results and their scientific novelty consists in studying of the problems of production as major ones, but on the basis of economics methodology taking into account the modern changes in the world economic space.

**Key words:** manufacture; real sector of economy; non-material production, economic growth; modern reproduction.

## PSYCHOLOGY AND PEDAGOGICS

P. 169. *Baranova Mariya M.* Kemerovo State Agricultural Institute. **ONTOGENESIS OF CONSCIOUSNESS ON EARLY STAGES OF LIFE: FUNDAMENTAL CHARACTERISTICS, TYPOLOGY AND DEVELOPMENT OF PRE-VERBAL MEANINGS.** This article is devoted to generalization of theoretical and experimental data of children's consciousness studies on the early stages of ontogenesis. The views on the content, structure and development of the consciousness, the category of ordinary and imaginary reality, fundamental structures of the consciousness (presentation of a mental object, space, time and causality) are given. The specific character of their formation and development in children's mind is described considering the experimental data accumulated in the works of J. Piaget, E.V. Sybottsky and other researchers. General methodological guidelines of reality representation and the basics of psychological analysis of the consciousness problem in Russian psychology in the works of L.S. Vygotsky, A.N. Leontiev are considered in the article. The author systematized a few developments of Russian researchers aimed at studying the children's picture of the world: in particular, the idea of pre-verbal ways of reality representation in the works of A.P. Stetsenko and I.E. Isenina, where the conditions of subjective systems of meanings in the evolving consciousness of a child are mentioned. The basic forms of the meaning systems fixation of the child's mind and the laws of their functioning on the early stages of pre-verbal ontogenesis are revealed. The paper describes the

concept of stages of ontogenetic development of the systems of meanings according to the laws of changing activity throughout the development. It is shown, in particular, that the basis for the formation of the first systems of meanings of a baby presents the emotional-personal communication with adults, manipulative and subject-manipulative activity of a child. The analysis carried out in the framework of this article proves once again the need for an empirical study of the initial ontogenetical forms of reality representation (systems of meanings of a child in various areas of the personal experience), especially in connection with the fact that "the possibility of further carrying out of the ideas of the specificity of the human psyche development" depends much on identifying and conceptualisation of the regularities of primary representation formation of the social world by a child.

**Key words:** consciousness; system of values; semantic categories; establishing the pre-speech and verbal values; forms of representation of reality.

P. 173. *Dyakova Yelena Yu., Osokina Olga S., Lalaeva Galina S., Zakharova Anna N., Mironov Artyom A.* Tomsk State University.

**EFFECT OF THERAPEUTIC PHYSICAL CULTURE STUDIES ON THE FUNCTIONAL STATE OF STUDENTS.** Remedial physical education (gymnastics) is an independent scientific discipline, used to treat and prevent various diseases by means of physical culture. Activities of this discipline are effective in the prevention, treatment, rehabilitation and maintenance of the level of health of people with diseases of the cardiovascular, respiratory, digestive systems, musculoskeletal system, diseases of eyes, etc. A disease suppresses and disorganises the locomotor activity – an indispensable condition of the normal formation and functioning of any living organism, so physical therapy is a very important element in treating a disease. In 2010, Tomsk State University organized a group of medical physical culture for students with significant variations in health. Classes were held twice a week and last 75 minutes each. The doctor admits students to these classes. Before each class the teacher was interested in students' health condition: blood pressure and heart rate were measured. During and after the classes control measurements of heart rate and blood pressure were conducted. The activity consisted of introductory, core and final parts. The program of study included 19 people engaged in group therapeutic physical culture. The groups were mixed according to the disease. To evaluate the effectiveness of training, a study was conducted of the functional state of the respiratory and muscular systems of students. The respiratory function was assessed by measuring lung capacity with dry spirometer. The function of the muscular system was assessed by measuring the power index using a dynamometer. The study found that one semester is a slight increase in performance in the vital capacity and an unreliable power reduction index. It is known that at the end of the semester, with the development of persistent fatigue, the activity of students in the classroom is reduced because of the evolving process of protective inhibition. The dynamics of the learning process with its uneven distribution of loads and intensification during the exam period is a kind of test for students' organisms. A reduction in the functional stability of the physical and psycho-emotional stress increases the negative impact of hypodynamia, violations of labour and rest, sleep and nutrition. Thus, a slight increase in lung capacity indicates the correct selection of tools and methods used in classes of therapeutic physical culture conducive to the normalization of the respiratory function.

**Key words:** medical physical culture; functional state.

P. 176. *Zalevskiy Genrikh V., Kuzmina Yulia V.* Tomsk State University. **ON PROBLEM OF MODEL OF UNIVERSITY COORDINATING CENTRE "HEALTH CULTURE OF STUDENTS".** In this article the problems of students' health and organizing a Centre in the university, whose function is to coordinate psychological support of students in the following directions: prophylactic, preserving, strengthening students' health and psychotherapy, are discussed. The necessity of such a Centre is caused by the situation of unsatisfactory health state of students: not only physical but also psychological, social and spiritual. A complex approach is needed, which includes physical culture and sport, medical help and psychological support. Students of different forms of education, years of study, professions, (psychologists, clinical psychologists, naturalists and athletes) and regions (Tomsk, Bijsk, Vladivostok, Ekaterinburg), men and women aged 17–35 (702 persons total) took part in the study. The following methods were used: the questionnaire of R. Straub "How are you?" adapted by G.V. Zalevskiy, Rokeach Value Survey, Short self-actualisation scale by Jones and Krandel, and some scales of Tomsk questionnaire of Rigidity by Zalevskiy (TQRZ). The mathematic-statistical methods were also used: descriptive, correlational, factorial, and cluster analysis, and ANOVA/MANOVA. The whole-value approach was the basis of study in the frame of anthropological psychology and in the context of bio-psycho-socio-noetic model and structure-level organization of man and his health. The keynote conclusions of the study are as follows: 1. The health level of students in the researched age (17–35) on all the scales of Straub questionnaire is moderate or average, which is conditioned, first, by a low level of their life style, which, second, in its turn is caused by the low rank of health in the value system of students. 2. The physical health, reflecting the biological part of bio-psycho-socio-noetic nature of man, in the process of ontogenetic socialization is influenced by the man's nature and health of a higher level (first of all spiritual) and integrates into the structure of "personal health" (which includes psychological and social health), that is, first, it turns out, that Juvenal's mens sana in corpore sano and vice versa is not only desirable but also possible, that certainly, and, second, one should stop to think about health in physical terms only. 3. Profession influences physical and spiritual health of students mostly. Students of professions (sport students, psychologists), showing higher results on health scales, rank the value of health higher, too. 4. Without dependence on the study year, profession and higher school location, a coordinating Centre "The health culture of students", whose functional and coordinating model we have proposed, can be necessary and can play a very important role in the solution of prevention, saving and strengthening students' health, and giving psychological help to students of the "risk groups".

**Key words:** health culture; model; centre; students.

P. 180. *Kovalyova Yulia Yu.* Tomsk Polytechnic University. **MODULAR ENGLISH LANGUAGE TRAINING FOR WOULD-BE TECHNICAL EXPERTS.** A number of national high technical schools have joined an international scientific and educational community and in addition started to extend collaboration with a majority of higher educational institutions, organizations and companies abroad. On the way to globalisation and integration many of the national universities have encountered a problem of an inefficient level of foreign language competence mastering by the university graduates. In this connection, high technical schools required new standards of training would-be specialists capable of functioning in the international scientific and academic environment and possessing at least one foreign language. The achievement of the above mentioned goals can be possible due to implementation of a modular educational technology in the university academic process. This technology makes it possible for any student to follow an individual academic curriculum, which includes a target-oriented program, information bank and teaching guide. Thus, modular training is considered to be a particular didactic system, which is realized through a total of different forms of teacher-student partnership organized in a number of academic units (modules) with the purpose to raise the efficiency of teaching material coverage by students and in addition to improve

the quality of foreign languages training. The modular foreign languages training program was designed and launched in the academic process of Tomsk Polytechnic University in 2005. The program is intended for would-be technical experts studying a foreign language on a profound basis. One of the main conditions of modular training program successful implementation in an academic process is undoubtedly a modular foreign languages syllabus. To design a modular foreign languages syllabus is a time-consuming activity bearing severe requirements to educational designers' pedagogical and methodological competences. It was designed in accordance with the methodological principles of modular training such as modularity, structural division of teaching content into separate modular units, dynamism, activity method, flexibility, method of conscious perspective, versatility of methodical counselling and parity.

**Key words:** modular training; modular principles; modular syllabus; module; cultural and linguistic personality; communicative and cultural competence.

P. 183. *Kolesnikova Svetlana V.* Omsk Institute of Economics. **THEORETICAL CASE STUDY OF COMMUNICATION IN PSYCHOLOGY.** The term "communication" appeared in the scientific literature in the beginning of the 20th century and has three meanings: 1) communication facilities of any objects of the material and inner world; 2) dialogue, information transfer from person to person (interpersonal communication); 3) dialogue and information interchange in a society (social communication). There is a set of definitions of social communication. Most common of them are: social communication, that is the transfer of information, ideas, emotions by means of signs, symbols; it is the process which connects separate parts of social systems with each other; a mechanism by means of which the power as an attempt to define behaviour of another person is realized. In applied models of communication, those are models, which in the middle of the 20th century were urged to explain processes in sharply developed technical systems; components of a communicative chain for the purpose of predicting new effective communicative actions (J. Habermas) are traced. The basic applied models of communications were Claude Shannon's (mathematical) and Norbert Wiener's (cybernetic) models. There are various theoretical models of social communication. Within the psychoanalytic model based on the theoretical doctrines of Z. Freud and K. Jung, communication is understood as a replacement of the unconscious inclinations by an individual. The Existentialist model considers communication as "immersion in the world". This understanding of communication represents the development in the 20th century of such a system of customs, as individualism. The relations developing in the conditions of individualism will organize human life on the principles of isolation and self-isolation that generates such a phenomenon of culture as uncommunicativeness. Uncommunicativeness is disintegration of all social communications, the extreme form of mutual alienation. As a result, individuals have the feeling of loneliness, sense of senselessness, short-term and lack of necessity of person's existence in the world. Philosophers named such a situation "communications crisis". Let us consider the theories constructed in the frameworks of the cognitive paradigm. Theories of "framing" assert that processes of processing and interpretation of the information by people are influenced by previous structures of values or the scheme. There are three strategies of processing the news: "active processing" – the individual searches for additional sources of the information, as the information is always incomplete; "reflective integration" – the individual considers or discusses with others the information of mass media; "selective scanning" – the individual perceives messages, corresponding to his ideas. According to the constructivist model of effects of mass media, the audience is necessarily constructed on the basis of personal experience, interaction with neighbours and selective interpretation of the information. Frames are considered as schemes of presentation and perception of news. Two kinds of frames are: mass media frames and individual frames. Frames are central organizing ideas or plots, which introduce values in sequences of events, the essence of the message. Individual frames are clusters of ideas stored in brain of an individual, which process the information directly. For interpretation and processing of political information two kinds of frames can be used: global political views and short-term ones, depending on the event. Within V.I. Kabrin's trans-communicative approach the author develops a hypothesis about the communicative nature of the person in which the development of communication plays the role of a "universal integrating process". It is necessary to notice that in this concept of the term "communication", "communicativeness", skills to communicate are considerably expanded in comparison with the same concepts of traditional western and domestic psychology. So, V.I. Kabrin's understands communication as a certain universal information-power meaning-creative process, emotionally charged and accompanied by deep eidetic experiences. So, Kabrin notices that communicativeness as an integrated characteristic of the person can join the genetic experience of the past generations and lives.

**Key words:** communication; framing; trans-communication.

P. 187. *Tarbokova Tatiana V.* National Research Tomsk Polytechnic University. **DEVELOPMENT OF A DIDACTIC SYSTEM MODEL FOR ACTIVATING COGNITIVE INDEPENDENCE OF JUNIOR COURSES ENGINEERING STUDENTS.** The educational standard of Tomsk Polytechnic University imposes additional to federal, regional, and university requirements: a modern specialist must know how to supplement and to renew knowledge, to carry out a search, to make original decisions, to be a creative personality independently. As a result, there are consequences for organizing the training process such as increasing of the role of independent work, individual training, importance of methodological directivity, generating of creative thinking, initiating of the activity of educational process participants. To realize these requirements, it is necessary to create specified pedagogical conditions. The concept "pedagogical technology" in the educational practice is used at three hierarchically coordinative levels. In accordance with the levels of pedagogical technology we determine three levels of pedagogical conditions: 1. The general pedagogical (general didactic) level. The general pedagogical technology characterizes the integral educational process in this region, in an educational institution and a certain level of training. It means that the pedagogical technology is synonymous to the pedagogical system: it includes the totality of the content, means and methods of instruction, the algorithm of the activity of subjects and objects of the process. These are methodological pedagogical conditions. 2. The object level. The object technology is determined as a "particular procedure", i.e., the totality of methods and means used for realization of the specific content of instruction and training, for example, within the framework of one training discipline. These are systematic pedagogical conditions. 3. The local (modular) level. The local technology is a technology of different parts of the training – cognitive processes, solutions of particular didactic problems (such as technology of independent work, technology of concepts forming). These are content-organizational and motivational-volitional pedagogical conditions. The developed model of a didactic system includes the requirements of government educational standards, education purposes and result, training material, instructor, student and the pedagogical conditions such as: methodological, systematic, content-organizational, motivational-volitional.

**Key words:** model; technology of instruction; didactic system.

P. 194. *Sherin Vladimir S.* Tomsk State University. **MODELLING PARAMETERS OF BIODYNAMIC STRUCTURE OF A FLIGHT PART OF THE TKACHEV EXERCISE OF COMPLEX COORDINATION ON A HORIZONTAL BAR.** The tech-

ique of gymnastic exercises is a subject of a competitive judgment, therefore considerable time in the training process is given to technical training. The technique is constantly improved and changed, becoming more rational. Nowadays a modern basis of research of techniques of gymnastic exercises, its profound analysis and perfection are biomechanics methods. For the analysis, updating and perfection of exercises techniques the following means are applied: video recording of exercises; an experimental-analytical method of definition of geometry of weights of a body of the person; computer processing of video data of registration of movements of sportsmen and construction of visible records of exercises on the computer; analytical and numerical methods of calculation of kinematic and dynamic characteristics of investigated exercises on the computer, construction of models of techniques, and also the kinematic and dynamic analysis of its structure. As a result of the biomechanical analysis of techniques of gymnastic exercises on the basis of the received data on techniques parameters there is a possibility of constructing both the reference model of techniques of the investigated exercise, and the individual model for a certain gymnast. And the techniques of the investigated exercises received as a result of the biomechanical analysis parameters are a reference point for trainers and sportsmen. Exercises with the expressed flight phase exist in many kinds of sport, in particular, in artistic gymnastics. The given structural group of gymnastic exercises is obligatory on a gymnastic apparatus (bars, parallel bars, etc.); it is also highly estimated by judges. In modern gymnastics it is considered that for faster and qualitative sportsmen's studying and mastering the techniques of over flight exercises it is necessary not only to have a high level of physical and technical readiness, but also to know the modelling parameters on its kinematic and to dynamic characteristics (the starting position of the body weight centre on axis Ox; the final position of the body weight centre on axis Ox; the starting and final position of the body weight centre on axis Oy; the maximum of lifting of the body weight centre on axis Oy concerning support; the resultant speed of the body weight centre on axis Oy, and etc.), definition of which is the purpose of our research. The biomechanical analysis of the techniques of bend-unbend movements in the joints of the gymnast executed in the flight period of the Tkachev exercise allows making the following resume on kinematics and noting its modelling parameters: 1. Transition from the basic part of the exercise in the flight part is carried out by the early active counter tempo movement, that is by a short loss of contact with the bars. It is necessary to provide a timely performance of requirements to amplitude and speed of the counter rotation in the flight part of the exercise. 2. During the flight part of the exercise, the bend-unbend movements in joints have an uncoordinated character – the bend movements of feet in coxofemoral joints are carried out more slowly, than in the humeral ones. It is necessary that the gymnast remained absolutely direct longer in flight, which is highly estimated by judges of competitions. 3. In the article the modelling parameters characterizing the flight part of the exercise, which have been defined during our research, are also presented.

**Key words:** biomechanical analysis; techniques of gymnastic exercises; model of techniques; parameters of unsupported phase of flight.

P. 199. *Shilko Victor G., Guseva Nataliya L.* Tomsk State University. **SOCIOLOGICAL ANALYSIS OF LIFESTYLES, PHYSICAL TRAINING AND SPORTS ACTIVITY OF STUDENTS.** Numerous studies in physical education suggest that the structure of motivational aspirations and consideration of social factors that are relevant to dealing with health, physical fitness, the prestige of certain types of physical culture, etc., have a significant impact on the process of engaging young students to regular practice of physical culture and sports activities. The purpose of this study is the study of the motivational sphere, lifestyle of students. In Tomsk State University in 2008 and 2011 two opinion polls were conducted, with 642 students of 18 faculties of 4 institutes (362 men and 280 women aged 17–25), engaged in physical education for 6 units by type of physical culture and sports activities, participating. The polls were conducted at the beginning of the first and the end of the third year. The dominant motives in the educational activity are of interest to the acquisition of knowledge (42.9% of students), the desire to have a job (profession) (35.5%), desire for a student's life (33.6%), desire to succeed (33.6%). For 61.2% of the students it is important to be smart, they have desire to possess intelligence. Among the factors limiting physical training, the majority referred to the lack of time, lack of financial security, reasons related to health, etc. Students, who do not have motives for physical training and sports activities, reported the lowest levels of physical fitness, subjective positive evaluation of the role and place of physical training in the cultural life of society, in educational activities, desire to do it. It is established that students with 1–2 motives for physical training and sports activities seek to have the best physique. Respondents with 3–4 motives "love sports" (75%), and students with 5–6 and more motives name specific sport activities as reason for training (92%). Students with lesser involvement in physical culture have more common motives, and their differentiation and complexity is associated with the physical training. Analysing gender differences, it can be noted that the formation of male motivational aspirations for physical training was more successful. The structure of motivational aspirations is an important component of physical culture and a human largely determines its involvement in physical exercise. At the same time the process of familiarizing students with physical culture and sports activities significantly affects both educational and professional motives.

**Key words:** motivational preferences; material and housing provision; physical training and sports activities; physical and professional training.

## BIOLOGY

P. 203. *Bocharov Anatoliy Yu.* Institute of Monitoring of Climatic and Ecological Systems, SB RAS (Tomsk). **STRUCTURE AND DYNAMICS OF HIGH-ELEVATION MOUNTAIN FOREST OF SEVERO-CHUISKY RANGE (ALTAI MOUNTAINS) IN CONDITIONS OF CLIMATE CHANGE.** The age structure of high altitudinal forests and fluctuations of tree radial increment were studied on sample areas in the waterhead of the Aktru river on the northern macroslope in the central section of Severo-Chuisky Range (the Altai Mountains) at 2150–2350 m a.s.l. The study area falls into the Central Altai mountain hollow province of larch and dark coniferous forests. The main tasks were to study the age structure of the forests, to isolate generations, and to built and analyse tree ring width chronologies. At the upper forest line in the Aktru river valley the relatively closed stands are Siberian stone pine open woodlands located at 2350 m a.s.l. The pure old Siberian stone pine forests grow lower the line. The Siberian larch and Siberian stone pine forests locate down to 2200 m a.s.l. The altitude decrease as low as 2150–2100 m a.s.l., the younger Siberian larch and Siberian stone pine forests of the after-fire origin supersede the primary old forests. Within these altitudes the pure mid-aged Siberian larch forests grow. The undergrowth is mainly the Siberian stone pine. The Siberian stone pine (515 years) and the Siberian larch (525 years) tree ring width chronologies were built in order to assess the climate effect on the radial growth. The coefficients of correlation between the individual ring rows of different sites are 0.35–0.72. The synchronism is 0.69. According to the ring chronologies, there are similar trends of increasing and decreasing growth in Siberian stone pine and larch trees. The radial growth correlates positively with the spring and summer month temperatures (coefficients of correlation is 0.55 in May and 0.50 in June and July). The analysis of the age structure of the

forests and fluctuation of the radial growth demonstrates that the increasing increment corresponds with the appearance of groups of the trees of close ages in all the sites of the valley. The young Siberian stone pine generation can be produced under canopy and in stand gaps from the undergrowth at the upper forest line and in the forests near it. Now there is intensive Siberian stone pine regeneration in both the primary and after-fire Siberian stone pine forests and Siberian larch forests with Siberian stone pine trees. The close periods of producing the generations at and near the forest line indicate the significance of the climate change in the growth, development and distribution of these forests in Severo-Chuisky Range. Relief is also important for forest development because it is a natural barrier for strong fires and has therefore an influence on conservation of the primary old Siberian stone pine forests with several generations.

**Key words:** age structure; dendrochronology; climate.

P. 207. Krylova Yelena G., Vasilieva Natalia V. Institute of Biology of Internal Waters of I.D. Papanin, RAS (Borok, Yaroslavl region). **GERMINATION OF SEEDS AND DEVELOPMENT OF SPROUTS OF *BIDENS* (ASTERACEAE) SPECIES REPRESENTATIVES IN COPPER SULFATE SOLUTIONS.** The influence of copper sulphate (0.1–50 mg/l) on germination of seeds and the initial stages of development of sprouts of plants of damp habitats is studied: *Bidens tripartita* L., *B. cernua* L. and *B. frondosa* L. The seeds of all the three kinds possessed high viability; under control they had laboratory germination of 83–97%. The seeds of *B. tripartita* were steady against the action of the toxicant in all the specified intervals of concentration. Copper sulphate solutions stimulated their germination, but did not influence essentially the laboratory germination. The seeds of *B. frondosa* possessed the greatest sensitivity to the investigated solutions: all concentrations of copper slowed their germination, which resulted in lower laboratory germination. The dynamics of germination and laboratory germination of the seeds of *B. cernua* were considerably affected by the copper sulphate at a concentration of 50 mg/l. The identical toxic effect of the copper sulphate on the development of sprouts has been noted with *B. cernua* and *B. frondosa*, however, none of the investigated concentrations caused full suppression of their formation. The development of sprouts of the investigated species is decreasing as follows: *B. tripartita*>*B. cernua*>*B. frondosa*. Copper ions made the greatest toxic effect on the growth and development of the root system of sprouts of all the investigated kinds; however, it was shown differently. The authentic decrease in length of the main root of *B. tripartita* and *B. frondosa* sprouts is registered at a concentration of copper of 10 mg/l. With this concentration, the main root of sprouts of *B. cernua* did not develop. The main root of *B. frondosa* did not develop at a concentration of 25 and 50 mg/l. Necrosis of the main root was not observed. Necrosis of additional roots of *B. tripartita* and *B. cernua* was observed at a concentration of 10–50 mg/l. Additional roots of *B. frondosa* were normal at a concentration of 10 mg/l, at 25 mg/l they were in embryo and did not develop at the maximum concentration. The elevated part of sprouts reacted to the raised concentration of copper in the environment to a lesser degree, the morphometric indicators authentically did not differ from the control at all concentrations. Necrosis of *B. cernua* hypocotyl began at a concentration of 50 mg/l. *B. tripartita* and *B. frondosa* did not show necrosis. All kinds showed partial necrosis of the cotyledon at the maximum concentration of copper. By results of our research, it is possible to recommend application of copper sulphate in low concentration for struggle against the distribution of invasive species of *B. frondosa*.

**Key words:** copper sulfate; plants of wet habitats; seed germination; seedling development; *Bidens tripartita*; *Bidens cernua*; *Bidens frondosa*.

P. 211. Stepanova Vera A., Pokrovsky Oleg S. Institute of Soil Science and Agrochemistry, SB RAS (Novosibirsk), Centre National de Recherché Scientifique, Geosciences Environnement Toulouse (Toulouse, France). **MACROELEMENTS COMPOSITION OF RAISED BOGS PEAT IN THE MIDDLE TAIGA OF WESTERN SIBERIA (THE BOGS COMPLEX "MUKHRINO").** Under the condition of technogenic pressure on waterlogged landscapes, the problem of climate change leading to glacier melting, permafrost degradation, flood, because of disturbance in heat and mass exchange between land and ocean, is very topical. Atmospheric fluxes with aerosol parts move towards zones with lower temperature and higher moisture and precipitate there. Such chemical elements as N, P, K, Ca, Mg, S containing in dust are used by plants to create organic substances. The aim of the work is to reveal the character of macro-elements contribution in peat deposits formed in different oligotrophic mire ecosystems geochemically connected to each other. The investigation of macroelements contribution in peat deposits was carried out in 5 ecosystems of a bog complex situated in the lower terrace of the Irtysh in Kondinsk geochemical region. The thickness of peat deposits varies from 1.3 to 3.5 m. According to morphological features, ash content and pH, in peat deposits of tree ecosystems – low ryam, hollow and poor fen – four peat layers are distinguished. The upper peat layer consists of *sphagnum* remains, with ash content 1.1–6.3 (3.7%), pH 3.2. The second layer is mesotrophic, the ash content increases up to 10.9%, and the higher value of pH (2.9) is observed. The third part with oligotrophic peat has the ash content of 1.7% and pH 3.7–3.9. The lower peat part is also mesotrophic peat. The ash content reached 14.5 and average 7.5%, pH ranges from 3 to 3.7. The peat deposit of the tall ryam ecosystem is divided into three parts: oligotrophic peat of 10 cm layer, 40 cm of mesotrophic peat and the lower peat layer (80 cm) consists of eutrophic peat. The ash content increases from 2.6% in the upper layer to 14.8% in the lower layer (average). The macroelements contribution is the same in peat soil profiles of all ecosystems – the content of macroelements increases in the upper and lower parts of profiles. In the upper part they accumulate biogenically, in the lower part of the profile they accumulate under the influence of underlying mineral horizons. Migration processes level genetic differences in contribution of macroelements content in peat soil profiles. A difference of potassium content in the living phytomass and the peat layer of 0–30 cm in bog ecosystems was found. The biological absorption coefficient of potassium varies from 1.5 (ridge) to 11 (oligotrophic hollow), which indicates its rapid leaching from dead parts of mosses, grasses and dwarf shrubs by bog water during their decomposition and absorption by living roots. Nitrogen content increases with the increasing of trophic elements in peat layers. In the tall ryam it varies from 0.9 to 1.4% in peat deposits. In the low ryam ecosystem it ranges at 0.4–1.5%. In the ridge-hollow complex, the hollow is richer with nitrogen – 0.8–2.1. In swamps the nitrogen content is similar to the hollow.

**Keywords:** macroelements; peat; peat soil profile; migration of elements; living substances; biogenic accumulation; phytomass; geochemical region; decomposition; fixation.

P. 215. Tokar Olga Ye. P. Ershov Ishim State Pedagogical Institute. **COMPOSITION AND CONSTITUTION OF AQUATIC MACROPHYTE VEGETATION OF LAKES BASIN OF THE RIVER BARSUK (VIKULOVSKY DISTRICT, TYUMEN REGION).** Among the flora of macrophytes of the lakes 40 species from 29 genera, 22 families, 6 sections are established. The basis of the flora is formed by the representatives of *Magnoliophyta* (32 species, or 80%). The maximum taxonomic diversity of macroscopic plants was observed in Lake Domashnee (65% of the total species composition). The smallest number of species (55%) was found in Lake Srednee. In Lake Blizhnee Mokhovoye 60% of the species were noted. The species of *Chara aculeolata*, found in Lake Srednee is

rare for the territory of Western Siberia, in particular, in Tyumen region. In all the three lakes species *Nuphar pumila*, *Nymphaea candida* are discovered, rare for the area of research. The analysis of the ratio of geographical groups showed that the aquatic flora of the Lakes basin of the River Barsuk composed species with broad habitat distribution. Ecological compound of the aquatic macrophyte vegetation consists of 22 environmental groups. The leading role in forming the aquatic flora of the lakes belongs to the species that occupy a series of habitats from water to the wetland. The aquatic flora of lakes consists mainly of species, the ecological optimum of which is in habitats with moderate and fairly rich nutrients. Species typical of freshwater and forming the basis of flora indicate fresh and moderately hard water in the lakes. The vast majority of detritophiles in the flora characterizes soils as substrates rich in organic matter. On the whole, coenotic wealth of the aquatic macrophyte vegetation of the lakes is characterized by 21 associations from 14 formations, 10 groups of formations, united in 3 classes. Lake Srednee has the maximum coenosis diversity (60% of the selected groups), Lakes Blizhnee Mokhovoye – 45%, the Domashee – 40%. The leading position in the number of selected associations belongs to the class Helophytetosa (9, or 42%). Classes Hydatophytetosa and Pleustophytetosa have 6 association (or 29%) in each class. Describing the hypercoenotic structure of the aquatic macrophyte vegetation of reservoirs, it can be said that the investigated lakes showed polytype regressive mesocombinations formed with phytocoenoses of two types of vegetation – water and marsh, which indicates the stable water cut of most lakes in the long-term plan and determines the eutrophication of water bodies.

**Key words:** flora; vegetation; overgrown lakes.

## SCIENCES ABOUT EARTH

P. 221. *Vershinin Dmitriy A., Tatarnikov Andrey V., Orlov Yevgeniy I.* Tomsk State University. **POSSIBILITIES OF ICE JAMS FORECASTING USING RIVER CHANNEL COMPUTER MODELS.** Possibilities of mathematical modelling of ice cover break-up and ice jams in the rivers of Siberia are considered. By example of the Tom River the technique for forecasting ice jams on the basis of calculation of ice cover break-up with the use of one-dimensional computer model HEC-RAS is developed. With sufficient information on the river channel geometry and hydraulic characteristics of the stream in representative cross sections the model allows predicting a set of parameters of the stream in a lengthy channel, including the presence of ice cover and ice jams with sufficient accuracy. The assumption of existence of dependence between the possibility of ice jam and certain combinations of characteristics of stream energy and ice cover thickness is put forward. The formula for the factor of ice cover break-up, depending on the kinetic energy of the stream and ice firmness, is offered. The model of 23 km of the Tom river channel near the city of Tomsk and upstream is developed and calibrated. The analysis of the break up factor change for the maximal and minimal ice firmness and various water discharges, which characterize kinetic energy of the stream, has been implemented. The sites of ice cover break-up corresponding to the reaches with high kinetic energy of the stream, and the sites of ice jams formation where kinetic energy decreases to the critical value are graphically determined. It corresponds to the long-term field observations data. Also an opportunity appears to define the quantity of ice in the body of jam, which has come from upstream and which depends on the length of the reach where the break-up occurs, ice thickness and channel width. Depending on channel morphology and quantity of ice in a jam it is possible to predict places of complete damming of the river and a danger of significant water level rise with flooding neighbouring territories. The analysis has been implemented and possible ice cover break-up scenarios for the Tom River within the city of Tomsk for extreme (minimal and maximal) values of ice firmness and high water discharges have been offered.

**Key words:** ice jam; computer model; criterion of break up.

P. 225. *Grigorieva Yekaterina A., Borisova Irina V., Yamskikh Galina Yu.* Krasnoyarsk State Pedagogical University named after V.P. Astafyev, Siberian Federal University (Krasnoyarsk), Krasnoyarsk State Pedagogical University named after V.P. Astafyev. **RADIAL MIGRATION OF SIDEROPHILIC (CO, CR) AND CHALCOPHILIC (ZN) TRACE ELEMENTS IN THE SOILS OF MOUNTAIN RANGE ERGAKI (WEST SAYAN).** The analysis of interconnection between the distribution of elements in grounds and their genetic peculiarities is an important task of soil elemental composition studying of different types. For a number of grounds these questions are studies quite well, however, the grounds of the Western Sayan, especially the mountain range Ergaki, have not been studied in this relation. The object of the study is topsoil of the mountain range Ergaki. The aim of the study is to establish the intraprofile distribution law of microelements (Co, Cr, Zn) in the Ergaki topsoil. Macro-morphological studies on the territory of the mountain range Ergaki have registered the formation of different types of ground profile. According to the horizon combination, all the studied grounds can be determined as alluvial grey humus gley soils (AY-G-CG~); grey soils (AY-AEL-BEL-BT-C); typical rusty soils (AY-BFM-C); typical brown soils (O-AY-BM-C), mountain-meadow soils (Ad-A-BC-C). The research showed that typical rusty and brown soils, as well as mountain-meadow soils, in terms of humus content can be characterized as of high humus, meanwhile alluvial grey humus gley soils – as of medium humus. In terms of pH quantity of the aqueous extract all the examined types are characterized by acid and weak-acid environment reaction – acidity goes down to the soil-forming rock. An insignificant number of carbonates have been found in all the studied soil types. The grounds of the mountain range Ergaki are characterized by high content of active oxide  $Fe_2O_3$  that can be explained by mineralogical makeup of the soil-forming rock, which is presented with granites and metamorphic slates. Aluminium active oxide quantity is insignificant and increases gradually to the soil-forming rock. Eluvial-illuvial differentiation of  $Al_2O_3$  occurs only in the grey soils profiles. Typical rusty and brown soils, mountain-meadow and grey soils are characterized by the weighting of granulometric composition from loose sand (upper organic horizon) to light loam (mineral horizons and the soil-forming rock). Alluvial grey humus gley soils are not differentiated with respect to granulometric composition and are classified as sandy-loam. The profiles of typical rusty (eluvial facies) and brown soils, alluvial grey humus gley soils are faintly differentiated with respect to the content of Co, Cr and Zn, characterized by descending migration and accumulated to the soil-forming rock. The analysis of cobalt, chromium and zinc radial differentiation showed that for the under test soils radial heterogeneity is generally ill-defined. The average zinc storage is registered in the grey and typical rusty soils of trans-eluvial facies catenas of the northern and southern exposure. Cobalt is poorly stored in the mountain-meadow soils profile (trans-eluvial facies). In profiles of the other tested soils forming on the surfaces of eluvial, trans-eluvial accumulative and superaqueous geochemical facies there is a scattering of Zn, Co и Cr.

**Key words:** mountain soils; geochemical facies; trace elements; radial migration.

P. 230. *Zhiltssova Anna A.* Yugra State University (Khanty-Mansiysk). **GEOCHEMICAL SEARCHES OF OIL AND GAS DEPOSITS BY CONCENTRATION OF AROMATIC HYDROCARBONS IN SURFACE SEDIMENTS.** The object of the re-

search is the Tsentralno-Kustovoi site of Kogalimneftegas company (the Vateganskiy shaft at the joint of the Surgut and Nizhnevartovsk arches) – a territory where search and prospecting drilling, extraction of hydrocarbon raw material is actively conducted. The research problem is to define the prospects of oil and gas presence at the Tsentralno-Kustovoi site. The solution of the problem is executed on the basis of the analysis of anomalies of migrating aromatic hydrocarbons as these substances are alien to natural biosystems, and the modern vegetation practically does not render masking influence on them. In the course of research ground samples collected from the face of explosive holes in the course of seismic prospecting performance at the Tsentralno-Kustovoi site were analysed. The depth of the explosive holes was 7–10 m. For the petrogeological analysis of the geochemical zonality of hydrocarbons, a theoretical physical and chemical model of a deposit has been made. According to this model, spatial localization of anomalies of migrating hydrocarbons in near surface layers occurs over the water and oil contact. These anomalies, in case of a deposit contained by a closed local raise, have a ring form and trace the external contour of the water and oil contact. As informative parameters total concentration of aromatic hydrocarbons of groups mono-, bi-, three- and polycyclic aromatic molecules with 4–5 condensed aromatic rings are accepted. The choice of aromatic hydrocarbons as search geochemical signs was defined by the fact that these substances are alien to natural biosystems and modern vegetation practically does not render any masking influence on them. These substances are capable to accumulation on clay minerals and keep mobility of hydrocarbons and ability to moving in heterogeneous geological environments. By results of laboratory researches, concentrations of naphthalenes, which are least of all sensitive to pollution by modern organic chemistry (in comparison with alcobenzols and phenanthrenes) and have essentially bigger concentrations (in comparison with polycyclic hydrocarbons), have been accepted as the prognostic parameter of perspective sites. On the scheme of the forecast of prospects of oil and gas presence three perspective sites are allocated, two of which are confirmed by drilling. For the third predicted site the cut of a possible trap (deposit) is offered. Basing on the received results of research, the use of data about the maintenance in near-surface deposits of heavy aromatic hydrocarbons as search attributes on oil and gas is recommended.

**Key words:** geochemistry; seismic prospecting; concentration of aromatic hydrocarbons; the forecast of deposits of oil.

P. 234. *Tsibulnikova Margarita R.* Tomsk State University. **DEVELOPMENT METHODOLOGY OF ECONOMIC ANALYSIS OF ECOSYSTEM SERVICES FOR MAINTENANCE OF RATIONAL WILDLIFE MANAGEMENT.** The importance of a systematic approach for enhancement of nature management efficiency and prevention of socially and economically significant natural resources depletion is increasing in modern conditions. At that, nature management system efficiency depends to a large extent on efficient information management, that is timely receipt and analysis of comprehensive and reliable information regarding the stock of various types of natural resources, directions, periods of use and revenues. The lack of adequate economic valuation of natural services is the reason of irrational nature management reducing its competitiveness on the stage of managerial decisions making. Methodology of ecosystem services economic analysis is based on the notion of full economic value (cost), which in its turn includes use and non-use values. There are three alternative use values: direct, indirect and delayed. All types of values are equally applicable to ecosystem services evaluation. Ecosystem services evaluation taking into account the social factor is a perspective trend on the way to rational use of landscape resources. The methodology suggested by the World Bank makes it possible to define both use and non-use values of natural resources and objects applying questionnaire methods aimed at identification of the population preferences in order to optimise nature management. Widely adopted methods based on individual preferences and taking into account ecological and social components of economic evaluation of natural resources make it possible not only to reduce the unobserved sector of economy, but also to provide informative basis for consideration of local population interests at managerial decisions making in the field of nature management. Issues of ecosystem services evaluation are not restricted to pecuniary valuation proper. The main task of ecosystem services evaluation is to identify the services, that is to determine the total volume of natural resources in use. The analysis of Tomsk oblast nature capital evaluation has shown that it is presently possible to evaluate the life support function of the whole range of ecosystem services, however, it is thereto necessary to create a standard legal mechanism allowing continuous monitoring of ecosystems economic value. In order to provide rational nature management, the procedure of nature management monitoring should have a municipal legal basis, which establishes the mechanism of its interaction with the regional monitoring system and defines responsibilities and authority of the local government in the field of nature management.

**Key words:** natural capital; ecosystem services; environmental accounting.