

SUMMARIES OF THE ARTICLES IN ENGLISH

PHILOLOGY

P. 7. *Antonova Maria K.* Tomsk State University. **METAPHORICAL INTERPRETATION OF INTELLECTUAL PHENOMENA AS WATER / LIQUID.** The present paper deals with the metaphorical segment of the Russian linguistic picture of the world, where metaphors with the semantics of water / liquid are used to describe intellectual activity. The methodology of the research combines techniques of structural semantics (componential analysis and distributive analysis) and cognitive linguistics (linguistic modelling and introspection). In the article some basic source images participating in metaphorical modelling of intellectual phenomena (thoughts, ideas, mind, etc.) as water / liquid are considered: 1) motion of water / liquid; 2) variation of temperature and / or aggregate state of water / liquid; 3) turbidity of water / liquid; 4) absorption of water / liquid. The correspondence between these source images and concrete situations of intellectual activity described metaphorically is revealed. The emergence of ideas, memories, etc., as well as the development of thought process is interpreted by source image of motion of water / liquid. The perception of information is metaphorically represented as absorption of water / liquid. The intensity of thought processes is compared to seething of water / liquid. The inability to think clearly is interpreted by source image of turbid water / liquid. The disappearance of ideas, memories, etc. is metaphorically represented as a transition from the liquid state into the gaseous one. The majority of metaphors examined in this article are axiologically neutral, but in particular contexts an evaluative component may be present. The exception is the metaphors describing inability to think clearly, which have a pronounced negative evaluation. In metaphors with the semantics of water / liquid, which are used to describe intellectual activity, the idea of passivity of a person to thought processes is mainly embodied. A thinking person is chiefly interpreted as an object of influence of ideas, thoughts, memories, etc., or a container in which they are. Thus, the conclusion is made that the use of metaphors with the semantics of water / liquid is a widespread and productive way to characterize the intellectual activity in the Russian linguistic picture of the world.

Key words: cognitive linguistics; structural semantics; metaphorical modelling; water; intellectual activity.

P. 11. *Wang Hua.* College of Foreign Languages, Shenyang Ligong University (China). **COMPARATIVE ANALYSIS OF CULTURAL CONNOTATION WORDS IN RUSSIAN AND CHINESE.** The paper presents an analysis of words conveying cultural connotations in Russian and Chinese, aiming to solve the problem that the learners of Chinese and Russian encounter in language learning. The author puts great emphasis on the significance of intercommunicative functions and accumulative functions of words in second language acquisition. A word's accumulative function is equally important as its intercommunicative function in language learning. The study of words is not complete without the consideration of the words' connotations. A word conveys more than its dictionary meaning, it implies evaluation, expression force, history and other complementary information. A word's connotation consists of specific connotation and accompanying range. Specific connotation or specific concept usually gets expressed in verbal communication between speakers. The accompanying range is the range in which the language tools associate certain abstract images with personal emotions. Besides, connotation indicates certain language standard and is influenced by many factors, such as society, region, technology and culture. A word's connotation comes into being in groups of people; it is not peculiar to an individual. Words carrying emotional and aesthetic associations are available in different languages. Therefore, it is very important to study the similarities and differences of the words' connotations in cross-cultural communication. For the second language learners in the attempt to study the words' connotations, they should put emphasis on the non-equivalent words, including the background words. The non-equivalent words are available in different cultures. They share the same literal sense but subtly differ in emotional and aesthetic associations. As a result of the differences in ethnic culture, the words' cultural connotations vary from culture to culture. The words with cultural connotations in Russian are different from those in Chinese. According to the national conditions of language, words with cultural connotations can be classified into the following five categories: 1. Equivalent words. 2. Words common in both languages but carrying cultural connotation only in one culture. 3. Words common in both languages but different or opposite in cultural connotations. 4. Words common in both languages with partially different cultural connotation. 5. Completely non-equivalent words. Based on the similarities and differences in cultural connotations between Russian words and their Chinese counterparts, the author comes to a conclusion that words with cultural connotations make a feature of reflecting reality and conveying culture. These words, directly or indirectly, mirror nonverbal activities, portray ethnic characteristics, reflect national convention, indicate people's attitude towards the world, and involve social system of the country.

Key words: ethnic culture; connotation; equivalent and non-equivalent words.

P. 15. *Gnyusova Irina F.* Tomsk State University. **GEORGE ELIOT AND LEO TOLSTOY (PASTORAL TRADITIONS IN ADAM BEDE AND RESURRECTION).** The plot of Leo Tolstoy's *Resurrection* (an innocent love of a gentleman and a beautiful country maid and following seduction) has deep literary roots: it is a part of a pastoral tradition ascending to the Antiquity. Tolstoy was not the first writer, who noticed fruitfulness of pastoral tradition use in a realistic novel. Creative reconsideration of pastoral traditions is the main theme of George Eliot's *Adam Bede* (1859), which Tolstoy knew well. We suppose Tolstoy used Eliot's experience creating *Resurrection*. The considerable proximity of the two novels' images and motives also indicates it. George Eliot's first novel may be called a pastoral encyclopaedia without any exaggeration. It absorbs features of practically all pastoral genre modifications – bucolics, georgics, country-house poem. Different traditions of pastoral genres may also be discovered in Nekhlyudov's recollections. It is of no wonder that the main heroines of both novels – Hetty Sorrel and Katyusha Maslova – have considerable resemblance. To our mind, the reason is Eliot's and Tolstoy's attempts to make the heroines the centre of the pastoral and anti-pastoral motives collision. Traditional pastoral motives are indeed present in *Adam Bede* to some extent. The novel's second part overthrows all idyllic bases of the universe: it turns out that the pastoral heroine is her child's murderer; the young esquire is a scoundrel, who disgraced honest farmers. Katyusha's further life description in the beginning of *Resurrection* is also given in contrast with the pastoral picture of Nekhlyudov's recollections. Some features of social reality comprehension also bring *Resurrection* closer to *Adam Bede*: thus, representing prison and a court sitting both authors accentuate inhumanity and affectation of the events. Pastoral traditions were necessary for Tolstoy in *Resurrection* for

showing the possibility of existence of a counterpoise for the evil, which triumphs in society. The writer's trend to future, his propagation of active moral conversion, reflected in *Resurrection*, was bound to have support in the past. The pastoral idea of the Golden Age and the georgic ideology as a genre were the most organic construction for this connection of the past and the future. In the narration Nekhlyudov works for the return of his ideal past. *Resurrection*, in fact, becomes a novel about a return to the initial human and world morality in youth. And it is only in the light of this idea of the return and by contrast with it that the grotesque representation of all social institutions becomes possible. Thus, George Eliot's *Adam Bede* became an example of active reconsideration of the pastoral aesthetics and genre directions for Tolstoy, which he used in his last novel's creation.

Key words: L. Tolstoy; G. Eliot; genre; novel; pastoral.

P. 23. *Kopytov Oleg N.* Khabarovsk State Institute of Arts and Culture. **NOTES ON GENERAL METHODS OF PHILOLOGICAL ANALYSIS AS METHODOLOGICAL SOURCES OF MODUS AND DICTUM TEXT MODELS FORMATION.** This article discusses some common methods of linguistic research, which the author considers most relevant to study the role of the text-modelling role of modus and dictum. The author believes that research of modus and dictum of the text remains in the field of semantic syntax, which is based on the works of Professor Arutyunova and others in 1970. Its principal object is a statement, a sentence. The study of the text should consider not only the simple arithmetic sum of propositions in simple and complex sentences, but also the synergistic product ($1 + 1 > 2$) expressing ideas about the world through the concepts (including images in literature). Modes of text can have different radii, to be equal to parts of the sentence, the sentence, part of the text, text. In addition, if the sentence is traditionally viewed as impersonal (as if no one addresses it to no one), the text has one of the major research categories – the author (the image of the author). Among the traditional linguistic methods the method of distributional analysis, compositional technique, the semiotic method are distinguished. The author specifies each of them, which is necessary to study the modus and dictum lines of the text. The method of distributional analysis undergoes special adaptation for modus and dictum semantic study of the text; the author uses only most general principle. To represent the methods, the article provides mini-case studies of text passages – journalistic and fiction. The author argues that from a certain viewpoint the composition method by Professor Kaida is close to the method of distributional analysis proposed above. It is also demonstrated by an example. To justify the fact that Professor Shmelyova's method of description of modus and dictum is most natural to study the modus and proposition line of the text, the author tells the essence of this description in great detail. Finally, the author proposes to use his method of explication of modus meanings in text to study the semantics of the text. He offers his variant of comparative analysis, when different moduses referring to one dictum event are considered (such as the Battle of Borodino, discussed in three types of texts – journalistic, scientific and fiction), as well as modus coming from one author who works in three speech (text) fields – journalistic, scientific and fiction. According to the author, these tendencies are widespread at present.

Key words: method; modus; dictum; text.

P. 30. *Larenok (Pomogaeva) Nadezhda S.* Chekhov Taganrog State Pedagogical Institute. **FUNCTIONAL STYLISTIC APPROACH IN SCHOOL AND UNIVERSITY STUDY OF SYNTACTICAL SYNONYMY.** The scientific novelty of the present paper is to analyse the proposed method of syntactic synonymy of complex and compound sentences, which is regarded from the standpoint of the tradition of P.V. Chesnokov of the relationship between logical and semantic forms of thinking. The transformations, preserving their sense, are used as the tool of research, the so-called synonymic changes. It is important to note that in the process of transformation not only formal but also sense aspects of the sentence change. A complex sentence with pre-pronominal subordinate clause relates to the complex sentence with an indivisible structure. Thus, it can be proved that an attempt to change it into a compound one can touch upon objective difficulties. First, a complex sentence of pre-pronominal type has its cognitive peculiarities, limiting the abilities of its transformation into a compound one: the main clause of the complex sentence speaks for its subordinate clause and in such a position (when one situation is stated by the other) it is strictly forbidden. Second, the attempt to transform a complex sentence into a compound one is accompanied with great changes in its grammatical meaning. The relations of circumstances, clearly signalled by subordinate means of causation in complex sentences can become the relations of consequence, coming out of the lexical-grammatical analysis of the verbal structure of the predicative parts in compound sentences. 1. *There are so many carriages, that it is necessary to crowd. (Chekhov, "On the wolf fight"). There are many carriages and it is necessary to crowd.* 2. *She liked the garden so much, that she'd never part with it. (Chekhov, "A Fatherless"). She liked the garden and she'd never part with it.* Thus, the analysis of complex sentences with pre-pronominal subordinate clause transformational abilities allows concluding about the absence of their synonymy with compound ones because all the attempts of change (transformation) are accompanied with a significant change of grammar meaning, which is also proved by cognitive theory. The comparison of the initial syntactical units and their transforms in the aspects of the semantic forms of thinking, related by them, revealed their divergence in one of the most important aspects – the character of the content thought components range. As the lexical-grammatical analysis showed, compound sentences, in comparison with complex ones, are not capable to envelop fully the content that is displayed in the hypotactical construction. The difference in the semantic volume of the compared units touches upon two significant moments: first, the transforms, denoting undifferentiated semantic relation, have quite a different character of their grammar meaning; second, non-coincidence of the subject structure is evident between the compared formations.

Key words: syntactical synonymy; functional styles; Russian language speaker; syntax; stylistics; communicative sphere; semantic forms of thinking.

P. 33. *Oglezneva Yelena A.* Amur State University (Blagoveshchensk). **LANGUAGE SITUATION IN THE RUSSIAN FAR EAST: DYNAMICS OF SLAVONIC ELEMENTS.** The article deals with the language situation in Priamurye – one of the Russian Far East territories. The importance of language situation studies is determined by the fact that, firstly, each language situation must be taken into account in the complex typological analysis of language situations as an object of studies; secondly, language situation studies help assess the prospects of language policy and forecast the tendencies of language life. The author of the article focuses attention on the Slavic component of the language situation in Priamurye. This ethnic component influenced the shaping process of the language situation and as a result predetermined its present state. The author aims at reconstructing the Slavic component and analysing its dynamics in the language situation of Priamurye beginning with the times when the Slavs first populated this territory. A certain analogy of this dynamics is likely to be found in comparison with other territories of the late Slavic population. The beginning and functioning of the eastern Slavic languages such as Russian, Ukrainian, and Byelorussian in Priamurye is viewed on the wide historical background: the development of Siberia and the Russian Far East. The languages of the native population of the region and the languages of the neighbouring state China are taken into account while analysing the language situation. The analysis of almost two hundred years of

language situation in Priamurye allows the author to conclude that one of the main characteristics of this situation is variety proved by the existence of many languages and language forms on the territory under study, which differ from each other by origin, typological features, communicative force, and status. Socio-historical factors influenced the quality of the language situation in the region and stipulated its dynamics. The dominance of the Russian language together with some relics of Ukrainian and lack of Byelorussian language variants which we witness today is the result of objective and subjective factors impact on the development of the language situation in the region. These factors taken together prove on the one hand the unique character of the language situation in Priamurye and on the other hand they expose the evolutionary conformity of it to natural laws which allows researchers to make language forecasts for other territories and at different times.

Key words: language situation; Russian Far East; Russian language; Ukrainian language; Byelorussian language.

P. 39. *Safatova Yevgenia Yu.* Kemerovo State University. **TRADITIONS OF PILGRIM LITERATURE IN WORKS OF A.N. MURAVYOV.** The pilgrim literature as a phenomenon of Russian culture appears, as a matter of fact, simultaneously with the religious phenomenon which lies in its basis. In the Old Russian literature pilgrim compositions were initially created on the basis of translation samples (among which researchers specify “proskinitariy”, “itinerariy”, “diegisis”). By the 12th century a special genre “hozhenie” is formed. In the course of the literary process this genre undergoes changes connected with various historical and cultural processes, with influence of secular “travel” (which is especially appreciable in the 18th century) and other factors, which in the beginning of the 19th century led to occurrence of a special synthetic literary form “pilgrimage to Holy sites”, which A.N. Muravyov embodied in his works. Muravyov creates some products on the basis of this genre model. In the centre of our attention was *The Pilgrimage to Holy Sites in 1830*, thematically close to the classical samples of the genre. When creating this work Muravyov intentionally addresses to the literary tradition of pilgrim texts formed throughout several centuries. The writer supplements the third edition of *The Pilgrimage* with *The Review of Russian Travel to the Holy Land* where he gives analytical judgement of development of the Russian pilgrim literature, from Ancient Russia up to the beginning of the 19th century. Muravyov approaches to this question with scientific accuracy – he compares different lists of Old Russian texts (from Imperial and Synod libraries), verifies the citation, makes comments on errors of modern publishers. Symptomatically, having access to the majority of Old Russian monuments of literature on travels, and to pilgrim compositions written by ecclesiastics in the 18th century (at that time it was not accessible to everyone), Muravyov is strictly limited by the circle of the analyzed texts. In *The Review* his attention is concentrated on “Hozhenie” of abbot Daniel, “Zhitie” of Evfrosinya Polotskaya, “The Wanderer on my travel and my life” by Zosima, “Travel of Trifon Korobeynikov” by V. Pozdnyakov, Vasily Ggary’s “Travel”, A. Sukhanov’s “Proskinitariy”, notes by S.I. Pleshcheev, and “Travel” by Meletiy, “Wandering around East Holy Sites” by V. Grigorovich-Barsky and “The Fragment from Travel across Greece and Palestin in 1820” by D.V. Dashkov. Each of these products possesses, according to Muravyov, sign features. For this reason, Muravyov does not solve the problem of describing many texts; his purpose is to select the key products reflecting the dynamics of development of the pilgrim literature and the phenomenon of pilgrimage. In this selection it is possible to track the logic of the author’s thought, to allocate the basic reference points. Having attentively studied key texts, in *The Review* Muravyov creates an original model of a pilgrim plot, which becomes the basis of art judgement of this theme in *The Pilgrimage*. Following the spiritual tradition of “hozhenie” and the secular tradition of “travel”, Muravyov gives a new interpretation of the pilgrim plot. The deepest religious feeling penetrates his work; it combines with the analytic features of a secular observer carefully investigating and estimating what he has seen. Thus, the two types of attitude do not conflict with each other, and harmoniously co-exist in consciousness of the narrating hero, creating a complete representation of the sacred space.

Key words: pilgrimage; plot; religious motives; literary traditions.

PHILOSOPHY, SOCIAL AND POLITICAL SCIENCES

P. 44. *Bogdanova Marina A.* Pedagogical Institute of Southern Federal University (Rostov-on-Don). **PARADIGM OF SEMANTIC REGULATORS OF THE OLYMPIC MOVEMENT IN ANCIENT GREECE.** The article analyses the connection of Greek religion with the Olympic Games, which are sacred festivals in honour of Gods. The author proves the fact that the peculiarities of Greek religion with its features and manifestations which do not keep within the bounds of habitual religions of Ancient times predetermined the rise of olympism. The author emphasizes that the main difference of Greek religious beliefs is in anthropomorphism. The Gods’ way of life of Greek pantheon is something like an exaggerated projection of a typical aristocratic way of life of Homer’s epoch, which was characterized by athletics. Both Gods and people like performances, and they are also not against watching duels of people, enjoying their strong and slender bodies, courage and bravery, because they know what thirst for struggle, triumph of winning and bitterness of defeat is. The article considers the fact that the Greek interpreted agon not like an ordinary competition of dexterity and strength but a special variety of divine justice. The aim of an athletic competition was to reveal those participants of Games who stand high in Gods’ favour and prove their high status and claims for power. Fantastic worship rewarded to winners of Olympiad was explained by the fact that they were respected not like great sportsmen but Gods’ favourites and heroes. In conformity with the ideas of that time the Greek saw resurrected mythical characters in their athletes-winners, appearing again to descendants in all their physical perfection. The author underlines that in Homer’s works, especially in *The Iliad* (nearly 700 poems are devoted to nominal games near Troy), you can find the detailed illustrations about the way the Games were held, their participants, and importance of the Games in the social life of the Greek society. The Olympic Games became the most important way of consolidating inter-Greek political relations, forming national identity against “barbarians”, speaking different languages. In 5–4 centuries B.C. there is a decline of olympism. The “decline” of Olympic ideals was also caused by a growing religious scepticism: the Greek did not treat their Gods-Olympians with the previous fear and respect.

Key words: Ancient Greece; Greek religion; anthropomorphism; Olympic Games; Homer.

P. 48. *Bukin Dmitriy N.* Volgograd State University. **ON INTERRELATION OF MATHEMATICAL KNOWLEDGE AND OBJECTIVE REALITY.** The problem of the ontological basis of mathematics is one of the central problems of math philosophy. Mathematics ontology is a special philosophical discipline aimed at revealing of general laws of mathematical object’s being and mathematical reality as a whole. Its problem field is defined, first of all, by questions: “what is the mathematical object?” and “how does it exist?” The review of the leading philosophical doctrines, each of which defends its own point of view on mathematical reality and ways of its description, shows that the basic ideological opponents throughout the history of thought, since Antiquity, are representatives of realism (Plato, Leibniz, Frege, Russell, etc.) and constructivism (Kant, Brouwer, Weyl, etc.). It is shown that dispute of the consid-

ered competing research traditions can be considered in the context of the dialectic contradictions presented by the relation of pairs of ontological and modal categories (“individual-general”, “subject-object”, “essence-phenomenon”, “final-infinite”, “possible-impossible”, etc.). It is important to notice that the article does not deal with *dialectic materialism*, but with *dialectics* as a whole powerful methodology of rational knowledge. Some results reflected in the work show that dialectics is not only a reliable method of comprehension of mathematical object’s being in its development – it is a basis of the analysis of categorically represented system of extra-historical invariant math bases. In work it is shown that interrelated categories of essence, phenomenon, relation, property, quality, quantity, measure, individual, plural, discrete, infinite, etc. enrich and constitute multidimensional mention of mathematical object’s being. Modal categories “necessary”, “real” and “possible” play a special role in this process. The content of key mathematical concepts reveals in their deep interrelation with basic philosophical categories. At the same time the author makes an attempt of estimation of the role of practice and experience in formation and development of mathematical knowledge. He comes to a conclusion that practice is the major moment of the rational knowledge (including mathematical thinking) ontologisation. The perspective direction of research of interrelation between mathematical knowledge and objective reality is the “activity approach”, in its non-metaphysical version removing contradictions between extreme measures of apriorism and Platonism. According to it, the mathematics basis is absolute representations reflecting universal requirements to objects of a reality from the point of view of human activity. Thus, possibility of practice is defined by pre-experience of mathematical thinking in its real interrelation with primary structures of activity. In preparing the article the author addressed to the works of Russian (V.V. Tselishchev, V.Ya. Perminov, I.N. Burova, A.G. Barabashev, etc.) and foreign (N. Mouloud, F. Kitcher, S. Kripke, etc.) experts engaged in the given problems.

Key words: dialectics; mathematical object; ontology of mathematics; practice; categories.

P. 53. *Myodova Anastasia A.* Siberian State Technological University (Krasnoyarsk). **ON THE PROBLEM OF EXISTENCE OF THE “MODALITY” CONCEPT IN MODERN HUMANITARIAN AND PHILOSOPHICAL SCIENCE.** The concepts of “modality” and “modus” are polysemantic scientific terms, which corresponds to their inner nature. Concepts of “modus” and “modality” are widely used in all the humanities. They are used extensively in psychology, linguistics, jurisprudence, logic, theology, musicology in Russian, English and German literature. It is obvious that by modality for the diversity of meanings in different scientific disciplines some general phenomena are understood, a special type of organization of reality. Nevertheless, attempts to summarize the content of the terms “mode” and “modality” in various sciences in order to identify their semantic invariant have not yet been made. This problem is in the purview of philosophy. Analysis of the concepts outlined in the humanities enables us to state a number of laws of their existence. The concepts of “modus” and “modality” have specific content within each of the humanities, and these contents are significantly different. Thus, the set of meanings of these concepts looks like a mosaic of unrelated concepts. Within each of the humanities these terms do not have a stable content; their semantic field is extremely wide. Concepts “modus” and “modality” in philosophy are not identified. Over the past ten years about thirty theses of candidates and doctors of philosophy have been written, where these concepts are marked in the subject. But only four of them (except relating to the specialty “Logic”) are a substantial elaboration of these concepts. Most researchers either do refuse to clarify their content, or understand them in the spirit of any other science, mostly philology, logic, or psychology. Very often the concept of “modus” and “modality” are replaced in scientific texts with the terms “form”, “aspect”, “expression”, or are thought of as identical to these terms. Their own philosophical meaning, despite the fact that it exists, is usually not observed in today’s papers. In this situation, it is natural that philosophical terms synonymous to modus are not understood. As a result, modern philosophy has no idea of the continuity of the tradition of modal thinking. The analysis of articles and theses shows that the methodological potential of the concepts is not yet disclosed because the conception of the nature of modality is not worked out. As a result, the presence of the terms “modus” and “modality” in the themes of scientific works, especially philosophical ones, does not specify any methodology with rare exceptions.

Key words: mode; modality; human science.

HISTORY

P. 58. *Galiullina Svetlana D.* Ufa State Academy of Economics and Service. **PERSONAL CAST OF TRUSTEES IN ORENBURG EDUCATIONAL CIRCUIT.** Nowadays appealing to the historical experience of the institute of trustees is timely within the context of the country development, as it plays a specific role in the educational sphere of Russia and has not lost its significance at present. In 1875 Orenburg educational circuit was established. The educational circuit included all the educational institutions of governorates and provinces. The introduction of the post of educational circuit trustee was an important innovation. He had both governmental and social functions. According to bylaws he was given administrative power to deal with management, guidance and organization of educational-pedagogical process, financial and operational activities of the educational institutions in the circuit. During 1875–1917 there were 12 trustees in Orenburg educational circuit. Each of them was assigned with the personalized Imperial Edict that was preliminary introduced by the Minister of National Education. Privy councillor P. A. Lavrovsky was the first trustee of Orenburg educational circuit, he was appointed on January 1, 1875. Privy councillor B.N. Dal came in 1880, Kh.P. Solsky – in 1885, D.S. Mikhailov – in 1885. At the beginning of 1890 councillor and cavalier I.Ya. Rostovtsev was appointed. On March 23, 1904 actual state councillor N.Ch. Zayonchikovskiy (pseudonym – Nikolay Nakhimov). From 1906 it was pedagogue, missionary N.A. Bobrovnikov, from 1908 – honorary member of Ufa governorate trusteeship of orphan homes A.V. Nikitsky, from 1916 to 1917 – actual state councillor A.N. Derevitsky. V.A. Gordlevsky, an outstanding orientalist-turcologist, Doctor of Science, Professor, became the last trustee of Orenburg educational circuit. Social characteristics and scientific activities of the trustees of Orenburg educational circuit are analyzed in the present work. Almost all the trustees of Orenburg educational circuit had a hereditary noble birth, basic university education, richest experience of administrative and managerial work, educational-pedagogical and scientific research activity in the National Science. Almost all the trustees had a scientific degree of Doctor; some of them had a Professor degree (extraordinary and ordinary ones). According to “the table of ranks” all the trustees had IV class and ranks of civilian community from the privy councillor to the actual state councillor, which were the highest civilian ranks having the statutory address “Your Excellency”. Some of the trustees were granted with the orders. Some of them were transferred by the trustees of other circuits so as to pass the administrative experience of Orenburg education circuit, leaving beneficent remembrance.

Key words: trusteeship; trustee; Orenburg educational circuit.

P. 62. *Kudriashev V.N.* Tomsk State University. **PROBLEMS OF THE FORMATION OF NATIONAL STATES IN THE INTERPRETATION OF RUSSIAN LIBERALS IN THE SECOND HALF OF 19TH CENTURY.** Russian liberals had a positive attitude to the tendency of formation of national states. But B.N. Chicherin did not agree with the interpretation of the right of nationalities to establish their state as a universal principle, which was supposed to be binding and be secured in international standards. He rather thought of it as of opportunities that are implemented by each nation, according to its ability to “public life”, which included the ability of people to obey the state in order to solve common problems. It was not only a special “talent” of the people, but also of the totality of external and internal circumstances favouring or hindering the formation of national states. Therefore, no declaration of the rights of nations to their state is able to create conditions for their implementation, and the problem of creation of national states was solved by policy, not law. Russian liberals in the 1860s rejected the idea of “historical peoples” present in the views of the Zapadniki, but the understanding of the stages of ethnic development remained. As a result, recognizing the equality of the potentials of all nationalities there still was the idea of differences in their level of maturity for independent historical activities at the present stage, including statehood support. In fact, this led to an artificial differentiation of various ethnic categories: “nations” could realize the opportunity to create their own state, while “tribes” could not. In the Russian Empire virtually all liberals recognized the status of a “nation” for the Poles, Finns, rarer – for the Little Russians. Other peoples of the Russian Empire were seen as “tribes”. This attitude is especially noticeable in regard to the peoples of the Caucasus, Siberia and Central Asia, and can be described as utilitarian-colonial. Works of liberal writers and liberal publications depicted them as backward tribes, to which Russia, a European state, brings economic and cultural progress. Therefore, liberal literature demonstrated a will to discuss the issue of autonomy for Poland (theoretically, in the distant future). The prospects for the “tribes” were to be parts of the Russian state. In a fairly long term, Russia was to continue as a multi-ethnic community. But the Liberals did not consider the Russian Empire as a multinational state. The only state nation should be the Great Russians. This approach can be interpreted as a realization of the principle of single citizenship, when representatives of all nationalities (ethnic groups) acquired the status of the Russian, as citizens of the Russian state, with equal rights, which allowed realizing their ethnic identity, but restricted claims to political autonomy of national character.

Key words: nation-state; multi-ethnic state; assimilation.

P. 69. *Kuznetsova Olga V.* Orenburg State Medical Academy. **HISTORIOGRAPHICAL ANALYSIS OF VIRGIN LANDS EVERYDAY HISTORY PROBLEMS.** Everyday history as a relatively new field of knowledge as compared with the traditional history offers innovative approaches to the analysis of historical reality: through the prism of perception of the ordinary man. This defines a new look on the problem of virgin lands development. But in order to develop a new system of research it is necessary to analyze literature related to the history of virgin land. As a result, two historiographical stages were identified (Soviet and post-Soviet period) in which the systematization of the work was carried out on the following aspects: analysis of the virgin land development, lifestyle of the people, the problems of free time and living support, family and demographic characteristics. The feature of the first period is hard ideologization of problems, creation of a smart picture of virgin land development. As a consequence, a narrow source base, only positive findings and conclusions, lack of criticism and limited scope of problems are marked (N.I. Anisimov, G.A. Kuznetsov, A.K. Karaev, B. Lazarev, V. Telyakovskii, and others). Literature of the second half of the 1960s – late 1970s is characterized by a more challenging approach to the study of living conditions in the virgin soil, analyticity increased; the material is extended by archival documents and published statistics (M.L. Bogdenko, V.I. Kulikov, and others). The first summarizing work on the problem of the peasants’ way of life was published, but it made a casual remark about virgin land (R.V. Ryvkina). It was only in 1990s that the interest to this aspect appeared maintaining the analytical and generalizing tendencies (E.Y. Zubkova, I.E. Koznova, O.M. Verbitskaya). Similar generalisation, with rare exceptions (I.P. Mokerov, V.V. Sorokin), in these aspects is characteristic for the entire period studied (B. Uralnis, A.G. Kharchev, and others). The second phase of historiography is characterized by a new interest to the old problems. But the direct study of virgin lands goes into the background and is mainly considered as an element of N.S. Khrushchev’s agrarian policy (V.A. Danilov, I.E. Zelenin). At the regional level in these two time-periods the examined trends remained (series “Heroes of the virgin land” by S.A. Smolyakov, and others). At present the range of problems became considerably wider: housing and cultural development, the role and importance of cinema and the tradition of folk art on virgin lands (V.A. Sidorov, B. Afrin, L.S. Panina). Special attention is paid to the development of human resources problem of the South Ural virgin lands, the analysis of which is connected with the analysis of material and cultural living conditions of virgin soil (E.V. Pakhomova). In general, historiographical analysis showed that this subject is considered casually or selectively.

Key words: everyday history; virgin soil.

P. 75. *Matveeva Daria V.* Tomsk State University. **RELATIONS BETWEEN CHINA AND MYANMAR IN THE CONTEXT OF CHINESE ENERGY DIPLOMACY.** Chinese involvement with the Indian Ocean countries aims to diversify suppliers and routes for transportation of hydrocarbons, for which it creates the so-called “string of pearls” strategy. Each “pearl” is a link of Chinese geopolitical influence and presence. The nature of strategy is not only the construction of various infrastructures, but also the strengthening of the bilateral ties with neighbouring countries. The main strategy of China’s influence is not any pressure, but the conclusion of mutually beneficial agreements, diplomatic work with Asian countries. Myanmar (former Burma) is significant by size, natural resources and strategic location. At the same time, Myanmar suits to Western standards under the concept of a “failed state”. China sticks to the non-interference policy towards the internal affairs of Myanmar. Military government, established in 1988, keeping the leader of the opposition party under house arrest for almost 20 years, is in power for now. This situation attracted international attention. In 1997 Myanmar was imposed sanctions on for the first time, but it was strategically beneficial to China, giving more opportunities to expand the influence in Myanmar. The countries maintain friendly relations through a comprehensive strategic and cooperative partnership, and their important part is the relationship between the armed forces of China and Myanmar, which is developing successfully. The states preserve a high frequency of intergovernmental high-level contacts, including meetings of top officials and senior military officials of both countries. China is the largest investor and one of the largest trading partners of Myanmar. The parties started construction of oil and gas pipelines, conducted by Chinese National Petroleum Corporation. All Chinese infrastructure projects in Myanmar aim to develop the north-western provinces of China, giving them access to the sea and the possibility to accelerate development through the ongoing infrastructure projects. Access to Myanmar’s ports and various transport routes can be called vital and essential for China. Over the past decade, China has formed very close economic and political relations with Myanmar, backed by the military-defence interactions. China is assisting to the modernization of the old network of naval bases and building new ports and bases that could serve as commercial and strategic objectives for both countries. While earning a new source of energy – natural gas from Myanmar by a convenient and efficient

pipeline, China diversifies the export of oil from the Middle East and Africa. Such large-scale projects provide development of Myanmar and strengthen the cooperation between the infrastructures of China and Myanmar.

Key words: energy security; energy diplomacy; Myanmar; South Asia; strategic lines of communication (SLOCs); China.

P. 79. *Mirkin Vladimir V., Morev Vladimir A.* Tomsk State University. **ON HISTORY OF RAILWAY MAIL IN WESTERN SIBERIA (END OF 19TH – MID 20TH CENTURIES).** In the second half of the 19th century the development of rail transport in the Russian Empire caused changes in the transporting, sorting and delivering mail. The speed of mail transportation by rail, the accuracy of the train, the best safety of postal items in the way, the ability to produce an analysis of correspondence on the road – all had a great influence on the nature of postal affairs and the development of postal service. In 1891 the Trans-Siberian Railway was laid. It facilitated the delivery of mail to Siberia and back, increased the speed of getting mail. Posts were transported in wagons, intended not only for transporting mail, but also for processing and exchange of correspondence during the journey. In the 1860s–1900s mail cars were built mainly as triaxial, later – as tetraaxial ones. There were a small number of biaxial mail cars, usually converted from passenger cars. For directions with the insignificant volume of postal traffic they built hybrid cars, in which one part was given for mail and the other – for passengers or luggage. By 1902 Siberian Railway had 30 eight-wheel cars. The main routes of mail cars had serial numbers. Forward and reverse routes were given odd and even numbers respectively. In 1913 the total length of the postal railway in Russia amounted to 58 000 km. This created favourable conditions for mail transportation and for further development of railway post. After the Revolution, the railway post office, like the rest of the communications industry, as well as transport infrastructure, was in a bad condition. The park of mail cars declined, passenger cars and wagons were adapted for postal purposes. The system of postal carriages in Soviet Russia did not differ from the pre-revolutionary one. All railway lines were divided into sections, called mail cars routes. Car fleet serving the Siberian line was formed from the parks of Siberian and Ural districts, as well as Irkutsk and Moscow. The resumption of building of passenger and mail cars belongs to 1925. During the industrialization of the country powerful car-building factories were created, which provided a significant increase and a qualitative renewal of the rolling stock. In the pre-war five-years a pilot building of all-metal passenger cars began. However, since the communications industry, along with light industry, service industry, etc., was referred to the secondary areas and funded as a residual, the modernization of railway mail in the reporting period was delayed. Thus, even by mid 1930s at the height of industrialization, Western Siberia post-office had only 54 postal cars for mail transportation by railway, their quality left much to be desired, and the fleet quickly worn out.

Key words: railway mail; mail cars; Western Siberia; Trans-Siberian railway.

P. 85. *Nikiforova Anastasia M.* Tomsk State University. **NEWSPAPER LE MONITEUR UNIVERSEL AS A SOURCE OF RUSSIAN-FRENCH RELATIONS IN 1801–1807.** The topicality of the theme of this article can be explained by the fact that nowadays it is the European direction that is one of the most important directions in the Russian foreign policy. In the past it was France that embodied and represented Europe in the Russian and European relations. Nowadays France continues playing a major role in the foreign policy of the RF. In the article we considered a small, but very important period of interaction between Russia and France. – 1801–1807, the period of the most active relations, the period when Russia participated in the anti-French coalitions (the 3rd and the 4th coalition). Since March 1801 the French press, particularly, the newspaper *Le Moniteur universel* paid attention to Russia for the first time. It was caused by the palace revolution and the following Alexander's accession to the throne. In total there are 78 publications, in which Russia was mentioned. There are about 2552 publications for the period of 1801–1807 that contain 835 mentions about Russia. This article can be divided into two parts. The first part is devoted to the characteristics of *Le Moniteur Universel*. The author of the article considers the history of newspaper establishment, explains the reasons for its establishment and main aims its founder pursued. According to the founder's idea the newspaper was to highlight revolutionary events and life in Paris and provinces, country's domestic policy and actions on the international scene, news in the field of science, literature and culture. After that the author describes the events in the country that had caused the changes in the newspaper's status and its orientation. With Napoleon's accession to the throne the newspaper got the status of the official governmental newspaper, the main aim of which was to misinform the enemy and create the appropriate atmosphere for continuation of aggressive wars in the society. In the second part the author gives statistic data, composed on the basis of articles in the newspaper. In the tables there are numbers that reflect the frequency of mentions about Russia, and the form of publications in the articles – either it was correspondence from theatres of wars or feuilletons that were so characteristic for the French press in the 19th century. On the basis of the data the characteristics of Russian and French relations in 1801–1807 was given, which helps to understand the dynamics of the development of the relations and trace the tendency for the decreasing of interest in Russia. In general, the author notices a large data volume, which means that Russia had taken an important place in the French foreign policy. The newspaper *Le Moniteur universel* being a historical document gained the special historical value for the research. Firstly, it broadens information about the relations between Russia and France; secondly, it is one of the sources that provide data that can help to understand the dynamics of the development of relations in the period of 1801-1807 and understand the domestic situation in the country and Frenchmen's attitude to Russia.

Key words: *Le Moniteur universe*;; Russian and French relations; Napoleon I; Alexander I.

P. 89. *Savkovich Yevgeniy V.* Tomsk State University. **PEOPLE'S REPUBLIC OF CHINA AND UZBEKISTAN: TRADE COOPERATION IN 1990S AND EARLY 2000S.** The People's Republic of China and the Republic of Uzbekistan established trade relations in early 1990s. It was necessary for China to sign as many different kinds of agreements as possible. Economy and trade were not at high priority level – Chinese Government only had started to understand the current regional situation in Central Asia and to formulate new initiatives for it after the Soviet Union collapse. PRC focused on several factors that could be crucial to develop economic cooperation with this newly independent country, these were: Uzbekistan's geopolitical position at the centre of Central Asia, economic potential and huge population. Uzbekistan diplomacy on the other hand decided to use a variant of competition for influence on Central Asia between major countries, China in this case was one of the main actors. At the very beginning Chinese policymakers pointed out, that only one or two of the five Central Asian countries could be a regional leader in the nearest future, so it started to boost trade relations – to persuade these countries, namely Uzbekistan and Kazakhstan, that China is a great chance to strengthen national economy and to find new secure trade routes through the territory of China to the East and West. Sharing a common border with Kazakhstan, China has no direct connection with Uzbekistan, but for the concept of the New Silk Road. Despite the solemn opening of the China – Uzbekistan trade commission (Sino-Uzbekistan Joint Economic and Trade Commission), working in various delegation formats, high-level visits, the volume of trade had dropped dramatically in the late 1990s. But in terms of Chinese bank credits the total volume had raised.

The conflict situation was detected by several researchers – China and Uzbekistan both continued industrialization policy, so in many spheres of economy they produced and purchased nearly the same goods. So both sides could not buy of sell these goods to each other. From the beginning of 2000s Chinese government decided to widespread influence by establishing of Shanghai Cooperation Organization (SCO). Uzbekistan, alongside with China, Russia and three countries of Central Asia, was one of the founders. Since then Sino-Uzbekistan trade and cooperation raised – not only in stable 2000s, but in late-2000s recession as well. The main achievement in recent years of cooperation was the pipeline Central Asia-China, which was built across the territory of Uzbekistan and Kazakhstan. Since late 1990s PRC have doubled financial support to the countries of Central Asia in almost all spheres, including traditional (textile, consumers goods) and newly formed ones (mine working in uranium, gold reserves, joint ventures, informational technology, biotechnology and so on).

Key words: Central Asia; People's Republic of China; Uzbekistan; trade; economic cooperation; international relations.

P. 95. *Safronov Oleg S.* Military Aviation Engineering University (Voronezh). **HISTORY OF RUSSIA OF 17TH-19TH CENTURIES IN P.A. KROPOTKIN'S INTERPRETATION.** The article is devoted to the analysis of debatable themes of history of Russia of the 17th–19th centuries in interpretation of the ideologist of anarchy-communism, outstanding scientist P.A. Kropotkin. The pioneer of Russian anarchism Mikhail Aleksandrovich Bakunin influenced Kropotkin's opinion, that is why the basic positions of the anarchist historical concept developed by M.A. Bakunin are also analysed in the article. P.A. Kropotkin, as well as M.A. Bakunin, considered the debatable questions of Russian history from the anarchical position. It is necessary to note that M.A. Bakunin's political and philosophical views influenced its interpretation of the basic events of the history of Russia. The ideologist of anarchism gave special attention to people's uprisings. He considered the hatred of people against the state system as a whole as the main reason for peasants' riots. In M.A. Bakunin's opinion, the state appeared in the history of Russia only in the 15th-16th centuries. Until then people lived freely, without the serfdom and the state pressure. Peter I, in his opinion, strengthened the government, adding "western bureaucracy". The ideologist of anarchism considered that people repeatedly tried to overthrow the authority of the state, but Stepan Razin's and Yemelyan Pugachev's attempts were not crowned with success. Only in the 19th century the Decembrists awoke the public idea. M.A. Bakunin believed that only the union of radical youth's efforts and national revolutionary spirit can liberate people from the authority of the state. General evaluation by ideologists of Russian anarchism on many key questions of history of Russia is traced. In particular, they considered the period of formation of the centralized state as the period of formation of "government". Before the 15th–16th centuries, in their opinion, Russia had a period of "independent cities". Only Ivan III and Ivan Grozny conquered independent cities and destroyed the bases of free life. Later, the ideologists of anarchism considered, Russian history witnessed strengthening of positions of the state due to reduction of freedom of broad masses. Introduction of serfdom was a significant step on the way of strengthening of the position of the state and the privileged class. The reforms by Peter I are unequivocally estimated as negative: Peter I only strengthened the state machinery created only for suppression of the last displays of freedom. P.A. Kropotkin attributed significance to the peasants' reform of 1861. Assigning greater hopes for Tsar the Liberator, they were later disappointed by the results of the reform, which had only formally released peasants, but economic "shackles" were still on hands of the working people.

Key words: Kropotkin; anarchism; historical sights; Russia.

P. 102. *Seregin Nicolay N.* Altai State University (Barnaul). **SOURCES AND MATERIALS FOR RECONSTRUCTION OF SOCIAL ORGANIZATION OF THE SAYAN-ALTAI REGION TURK CULTURE NOMADS.** The possibilities of the reconstruction of the social organization of ancient and medieval societies strongly depend on the specificity of sources, which scientists have. In the article the materials we can use for studying the level of development of the Turk culture of the Sayan-Altai region, which was one of the most important nomadic communities of Eurasia during the period of early Middle Ages, are considered. The main traits of the narrative sources of different origin are presented. One of the most important sources about the history of Central Asian nomadic tribes are the Chinese dynastic chronicles. We can find information about different aspects of the history of the Turk culture in the documents of the Sui (581–618) and the Tang (618–907) dynasties. Also important facts are presented in the Turkish runic texts. In addition, we can find limited information in the writings of Byzantium, Arabic and Persian authors. So, information about social and political organization of the nomads is presented in all these narrative sources. We can find Turkish titles, description of functions of some groups in the political hierarchy, and others in the documents. But at the same time there are some negative sides of this, which the scientists should take into account during the analysis of information. The general imperfections are the political conditionality, fragmentary character and inaccuracy of facts. All this is most important if we study the history of the Turks of the Sayan-Altai region, which was the north periphery of political associations of the nomadic tribes in early Middle Ages. As a result, the main source of information for the reconstruction of different aspects of social history of the nomads of the Turk culture is the totals of the excavations of archaeological monuments. The most perspective is studying of funeral objects, which are traditionally treated as the most informative for social reconstructions. On the basis of the experience of scientists in this field of research, taking into account the specificity of real materials, we can make and realize the program for study of funeral monuments of the Turk culture of the Sayan-Altai region and reconstruct social organization of the nomads of this community.

Key words: Turk culture; Sayan-Altai region; social organization.

P. 106. *Turusheva Natalia V.* Tomsk State University. **REFORMING CHINA'S CULTURAL SPHERE: POSITION OF THE COMMUNIST PARTY OF CHINA (LATE 20TH – EARLY 21ST CENTURIES).** The article discusses the cultural policy of the Communist Party of China (CPC) in the late 20th – early 21st centuries. Analysis and comparison of each of the three stages of reforms in China's cultural system is based on core documents. The first stage (1978–1992) saw the formulation of goals of the cultural system reform and inception of three major initiatives: reorganization of professional performance companies, establishment of contract-based responsibility for cultural institutions and introduction of "dual-track" approach to reform. In essence, one "track" was suggested for support to state-sponsored institutions and another – for community-supported creative units. During the second stage of the cultural system reform (1993–2002), CPC put forward further objectives and set new directions, one of them being the introduction of the concept of "cultural industry", which marked the Party's recognition of the role and place of cultural industry in the country's market economy. A distinctive feature of this period was close attention to legalization of cultural activities and strengthening of legislation. The third phase began after the 16th Party Congress (2003) when CPC embarked on deepening the reform of the entire cultural system. The main difference between this stage and the previous two lies mainly in the starkly different background the cultural reforms are set against. While earlier reforms were carried out first in the context of planned economy, and later at the initial stages of transition to socialist market economy, in the third phase market economy was already fully operational. Finally, the analysis of the Guidelines of

China's 11th Five-Year Plan for Cultural Development is given. The Program can be regarded as the framework document for cultural development aimed to form a society of modest prosperity (xiaokang shehui), build socialism and attain social harmony (hexie shehui). Thus, the author concludes that the present Chinese leadership is trying to create an updated ethical system appropriate to the socialist market economy by advancing the agenda of moral governance, which is not feasible without reforming China's cultural tradition.

Key words: cultural policy; cultural system reform; cultural market.

LAW

P. 109. *Andreeva Olga I.* Tomsk State University. **ON THE NECESSITY OF CRIMINAL CASE INSTITUTING IN PRESENT-DAY CRIMINAL PROCEEDINGS IN RUSSIA.** The article examines the issue whether the stage of institution of a criminal case solves the tasks for the sake of which it has been provided by the criminal procedural legislation. The author points out that since the Criminal Procedural Code of the Russian Federation came into legal force, the norms, regulating both the procedure of instituting the criminal case and the work of investigators, inquirers, agencies of inquiry and the heads of investigating authorities have been supplemented and altered nine times (The Amended Criminal Procedural Code of the Russian Federation of 07.12.2011). Meanwhile, the conclusion is drawn that the reform of the stage of instituting the criminal case does not have a systematic character. It is noted that the separation of the stage of instituting the criminal case serves as an additional safeguard against arbitrary rule of authorized officials; it was and still is explained by the necessity to react promptly to the information, covering the data about the features of a crime, to fix these data at most, to create conditions for the effective investigation and disposal of a case in the court; the necessity to perform a legally protective function. In this connection the issue whether the stage of instituting a criminal case complies with the above tasks is under consideration. The examination of current legislation and law enforcement practice shows that the present-day stage of institution of a criminal case does not solve the set tasks. In view of the above the author comes to a conclusion about the necessity of reforming the initial stage of criminal legal procedure, system changes of the criminal procedural law with due regard for foreign countries' experience.

Key words: institution of criminal case; tasks of stage; protection of rights at initial stage of criminal proceedings.

P. 113. *Babushkina Yelena A.* Ministry of Social Development of Novosibirsk region. **CRIMINAL RESPONSIBILITY FOR CRIMINAL TRESPASS BY DECEPTION OR BREACH OF TRUST WITHOUT LARCENY.** The crime in Article 165 in the Russian Criminal Code has some features, which generate some hardships in the theoretical understanding and in the process of investigation into charges of criminal trespass by deception or breach of trust without larceny. In law literature many authors, generally, write that the difference between the criminal trespass by deception or breach of trust without larceny from the closely-related corpus delicti is presence or lack of real damage in the result of withdrawal and/or appropriation of the alien property. Materials of separate criminal cases show that many disputable issues arise in the process of qualification of illegal acts in the social sphere (illegal obtain of subsidies, pensions or other grants), in the service sphere (unlawful use of electricity) and some other cases, which demand special study of the mechanism of illegal behaviour. At present, scientists actively discuss the enactment of a special rule in the Russian Criminal Code about responsibility for unlawful use of electricity, though opinions of scientists differ in some main points. Some scientists think that unlawful use of electricity should be qualified as larceny; others think that it is fault and a new rule of law should be introduced. In this article, the author also writes about fallacious qualification of cases when a public officer illegally uses office car by Articles 165 and 285 of the Russian Criminal Code. There are no grounds for qualification of tax evasion by Article 165 of the Russian Criminal Code or by Articles 165 and 198 (199) of the Russian Criminal Code. Unlike the case of car theft, criminal trespass by deception or breach of trust without larceny does not imply that the offender steals alien property. The main difference between crimes in Article 165 and Article 171 of the Russian Criminal Code is the presence or lack of acts of systematic character causing property damage for the victim and illegal enrichment for the offender. On the basis of analysis of the special literature and generalization of court practice, the author of the article thinks that criminal trespass by deception or breach of trust without larceny has the following forms (kinds): 1) unlawful use of alien property; 2) consumption of service without remuneration; 3) appropriation of alien property intended for the victim; 4) default on law or provision of a contract brining non-increment of victim's property in contravention of the markets conditions (illegal conveyance of passengers or goods by conductors, non-fulfilment of managerial duties, etc.).

Key words: property damage; deception; breach of trust; larceny.

P. 117. *Loginova Ksenia Yu.* Novokuznetsk Institute (Branch) of Kemerovo State University. **CRIMINOLOGICAL CHARACTERISTICS OF THE PERSONALITY OF MINORS GUILTY OF PROPERTY CRIMES.** The article discusses the criminological characteristics of the personality of minors guilty of property crimes: thefts, robberies, plunders, and extortion. By the results of the research it is confirmed that minors committing property crimes possess similar social-demographic, criminal-legal and moral-psychological characteristics. The research has shown that the modern minor property criminal represents a certain social type possessing a special attitude towards the reality, which is scornfulness to the common rules and norms of behaviour in the society. Minor property criminals have a special system of values with the priority given to material assets. The results of the research testify that the majority of property criminals are young (16–17 y.o.) men and girls, mainly brought up in full families, with average life-level. Girls make up 20% of the offenders. There is a dependency between the age of minors and the number of crimes they commit: the older they become, the more they break the law. The types of crimes change as well. Most part of property crimes are made by minors in group. The research has shown that property criminals do not have positive needs in work and study. Their leisure is mainly of entertaining character. The research has confirmed that minor property criminals had essential gaps in the field of legal knowledge, erroneous understanding of the content of the basic legal instructions. The study of motives of crimes has shown that motives identical to those of adult criminals prevailed. They are connected with the system of "negative" requirements of minors. Among the basic motives there was a mercenary motive which represented prompting to commit a property crime for satisfaction of personal material requirements. A considerable part of the motives of crimes is connected with the age features of minors ("motive of growth", levity, pressure from other persons). The conducted research has allowed allocating classification groups of property criminals. Allocation of groups is made on the basis of the basic motive of criminal activity, taking into account the intensity of its display. Characteristics of three classification groups of minor property criminals are allocated and given: "casual", "unstable", "malicious".

Key words: personality; minor; property crime.

P. 121. *Lozinsky Igor V.* Tomsk State University. **PROBLEMS OF MODERNIZATION OF CHAPTER 22 OF THE CRIMINAL CODE OF THE RUSSIAN FEDERATION.** Further improvement of Chapter 22 of the Criminal Code of the RF is not only change and addition making. The analysis of legal norms shows that there are many wrong norms attached to this Chapter. Accordingly, the norms of Chapter 22 of the Criminal Code of the RF are aimed at achieving six separate objectives. The first one is protection of a conscientious entrepreneur from officials' illegal acts (Articles 169–170.1 CC RF). The second is protection of individuals from illegal acts of others (Article 179 CC RF). The third is protection of sport and other leisure time organizations (Article 184 CC RF). The fourth is protection of individuals from an unfair entrepreneur (Article 176 CC RF). The fifth is protection of a state from unfair citizens. Due to the given objectives, the acts are classified into three subgroups: crimes against government order (Articles 171-1, 180, 181, 185–188, 190–194, 198–199-2 CC RF); crimes against justice (Articles 174-175, 177 CC RF); crimes against state security (Article 189 CC RF). The sixth is protection of an entrepreneur from another (Articles 171–172, 178, 183, 195–197 CC RF). The acts, for which the responsibility is held by legal norms, are various forms of unfair competition. The first is illegal entrepreneurship and banking (Articles 195–197 CC RF). The second is unfair bankruptcy of businesses (Articles 195–197 CC RF). The third is unlawful monopoly activity (Articles 178 CC RF). The fourth is unlawful obtaining and disclosing of tax, commerce and banking secret information (Article 183 CC RF). The norms on imposing criminal responsibility for these acts should be combined into one Chapter of the Criminal Code of the RF as 'Entrepreneur crimes'. Chapter 22 of the Criminal Code is subject to consideration. Taking away unusual norms from Chapter 22 of the CC RF gives the legislator an opportunity to concentrate on legal protection of competition. Due to it the legislator can adequately define criminalization of acts infringing relations in the sphere of entrepreneurship, which is unknown to him but prohibited by foreign criminal law, as well as he can define decriminalization of acts infringing indicated public relations. As a result, the Chapter will be composed of legal norms that protect competition from criminal acts.

Key words: modernization; improvement; financial crimes.

P. 125. *Olkhovik Nicolay V.* Tomsk State University. **EFFICIENCY OF CRIMINAL-LEGAL, CRIMINAL-EXECUTIVE AND CRIMINAL-REMEDIAL MEANS OF MAINTAINING NON-PENITENTIARY REGIME.** In this article the author considers both the concept and kinds of criminal-legal, criminal-remedial and criminal-executive means of maintenance of a non-penitentiary regime, and defines their efficiency. The author has come to a conclusion that it is possible for the criminal-legal means of maintenance operating in accordance with the principle "threat – punishment" to include a threat of substituting punishments provided by the law in case convicts maliciously evade serving their sentence. It is possible to name these criminal-legal means of maintenance "the general means" because they perform an insuring function when other – "special" criminal-legal and criminal-executive – means of maintenance have not duly affected the convict (e.g., the threat of placing the convicted to correctional works under the duty, placing the convicted to correctional works under the duty to come to a criminal executive inspection board for registration, additional duties on the convicted to freedom restrictions, the threat of non-reckoning of time during which the convict held the prohibited post or was engaged in a prohibited activity into the term of punishment, the threat of warning by a criminal executive inspection board) or are absent in general (e.g., under a fine or obligatory works). The efficiency of criminal-legal means of maintaining a non-penitentiary mode depends on criminal-remedial means to assure the appearance of the convict, hidden from the place of residence for the purpose of evading serving the punishment, to the court for the decision of the questions connected with the substitution of punishment for a more strict and on the terms of consideration by courts of the corresponding reports of the criminal-executive inspection board. The mechanism of maintaining the order of execution of punishments without isolation from the society should include criminal-legal and criminal-executive means which mediate affect the maintenance of the process of education and prevention as they stimulate the behaviour of convicts in the direction expected from the state. A stimulating character of these measures is constructed in accordance with the scheme: a stimulant – an encouragement measure. However, at present, the Criminal Code of the Russian Federation provides such means only with reference to freedom restriction. Some suggestions on perfection of the criminal, criminal-remedial and criminal-executive legislation regarding the establishment of legal means of maintaining of non-penitentiary mode are formulated in the present article.

Key words: penalty enforcement legislation; alternatives to imprisonment; punishments without isolation from the society; non-penitentiary regime.

P. 130. *Semenkov Maksim K.* Kemerovo State University. **ON LEGAL PERSONALITY OF INTERNATIONAL CRIMINAL POLICE ORGANIZATION.** The International Criminal Police Organization is both an intergovernmental organization and a legal entity with its own rights and prerogatives, which operates in concordance with principles and standards of international law. For quite a long period of time there existed some doubts connected with the intergovernmental status of the organization, which in the aggregate led to the fact that originally Interpol was registered in the UN as a nongovernmental international organization. A new Charter was accepted in 1956. It came into effect on the 13th of June 1956, and with some amendments and additions still remains valid. As some authors note, the essential point for the legal nature of an international organization is that its goals, principles, competence and structure, etc. have a coordinated contract basis. Such categories as international legal personality and international legal capacity are crucial for international organization status assessment. The correct understanding of such terms as "legal personality" and "legal capacity" of international organizations is the basis for defining the juridical nature of international organizations in whole and defining the legal position of every concrete international organization particularly. Moreover, as S.S. Kupreev fairly notes, the analysis of scientific literature and academic books on international law gives the evidence of a fact that a unified approach to defining these notions among international jurists does not exist today. However, the opinions of Ian Brownlie and Ye.T. Usenko, who point out several objective attributes that define international personality of international organizations, are closer to ours. Interpol was considered by the UN Economic and Social Council (ECOSOC) as a nongovernmental organization till 1971. After a special agreement undertaking about the collaboration between Interpol and ECOSOC, the United Nations Organization recognized the intergovernmental status of Interpol. Interpol is an intergovernmental international organization with its own rights and prerogatives and operates in concordance with principals and standards of international law by the power of its intergovernmental status.

Key words: International Criminal Police Organization (Interpol); international legal personality of intergovernmental organizations.

ECONOMICS

P. 132. *Krivyakov Stanislav V.* Tomsk State University. **RUSSIAN MODERNIZATION: THE PROBLEM OF CHOOSING A STRATEGY.** Modernization of the Russian economy is an obvious necessity. A number of indicators suggest that Russia is significantly lagging behind the world's leading economies. In particular, Russia ranks 64th in the world by the level of production per worker in agriculture, 66th by production in industry and 68th by production of GDP per worker. Russia's share in the global high-tech exports is 0.27%; the share of high-tech products in Russian exports of manufactured goods is 6.5%, the 63rd place in the world. The share of high-tech products of manufacturing industry in the Russian GDP is 2%. Payments to Russian owners of patents and licenses were \$493,670,000 in 2009, which is almost 30 times less than in Germany, 110 times less than in the EU and 200 times less than in the U.S. The purpose of modernization proclaimed by the country's leadership is the breakthrough of Russia to the group of countries generating the most modern and advanced technologies, which should identify the key characteristics of the Russian economy in the coming years. However, turning to the universal laws of economic development we are forced to conclude that the problem in hand is unlikely to be solved by the proposed method in the expected time. 1. It is well known that the adoption and development of basic innovation is cyclical, undulating pattern. This kind of cycles has been called "The Kondratieff long waves". The current wave of Kondratieff cycle began in the first half of the 1980s, and by now the new technological order has been completely formed. The expectations of any technological breakthroughs in the next 20 years are quite low. 2. In the process of formation of a new technological order, a limited number of basic technologies are chosen from the rich bank of technical and scientific innovations in various stages of development. In our country the focus is put on the support for the so-called "nanotechnology". However, this choice seems not very well founded, to put it mildly. There can be no assurance that these particular technologies would shape the face of the world economy during the next wave of scientific and technological revolution. 3. In presence of market economy, the economic system must be competitive and mobile in order to absorb and generate innovations. The Russian institutional environment is far from that state. Modernization of the institutional environment is a necessity, but it is obvious that current leadership is clearly not ready for it. Thus, the currently adopted strategy of modernization looks neither valid nor realistic. The catching up strategy is much more real and relevant to Russia, but it is not acceptable to the higher echelons of power.

Key words: modernization; Kondratieff cycles; institutional change; catching up development.

P. 135. *Kuzmin Dmitriy I., Sokolovsky Anatoliy A.* Krasnoyarsk State Pedagogical University. **REGION'S COMPETITIVE ABILITY AND ITS FACTORS (BASED ON KRASNOYARSK REGION).** As a consequence of the social economic changes conducted in Russia a region as a subnational entity was given the status of a constituent entity endowed with its own competence, rights, obligations and responsibilities, which are regularized by the Constitution of the country. Thus, conditions were created that helped regions to turn into beneficial owners of the conditions and results of manufacture, to receive the status of an efficient party in economic relations, which implies the formation of new features in multifunctional and multi-fold social economic system of the region, one of which is competitive ability. In general, we can state the absence of a clear common ground concerning the sense of the category "competitive ability of the region" as the interpretations of regional competitive ability have significant differences. Without minimizing the importance of different approaches in the interpretation of the above mentioned category, with a view of our investigation it is more acceptable to consider the competitive ability of the region as its ability to create conditions for stable development, which implies the ability of the region to create effective mechanisms to transform comparative advantages into competitive ones, and provide their development and improvement; the ability to improve the level of living or steady growth dynamics of economic good of the citizens of the region; the ability to create the habitat full of value. The formation of competitive ability is determined by the factors, which influence the process positively and negatively. It is thought that the territory's competitive ability is first of all determined by its geographical position and resource availability. Other regional advantages derive from the competitive ability of state administration (including the municipal one) and business competitive ability (including enterprises working in the region and the products they manufacture). We suppose that the factors of regional competitive ability should be grouped in three tacks: economic, social and ecological. Herewith economic competitive ability of the region is principally determined by the degree of economic development of the region, the degree of effectiveness of using the available resources and innovative activity; social competitive ability is determined by the degree of human potential development, that is by social standard of living of the region and its supportability with social services; ecological competitive ability implies that the region is capable of creating favourable habitat. In our research work we used a rating scaling technique, which enables one to relate real values of statistical indicators to optimal ones. We have Krasnoyarsk Territory as an object; similar objects are regions the Siberian Federal District comprises. We took into account the fact that indexes used for rating should not depend on the size of the regions and their population. Therefore, all particular characteristics of competitive ability were used in the calculation with the units of measurement, expressed in terms of relative numbers – person, part and pace ones. Moreover, we suppose that the calculation based on the data taken for one year can distort the real state, as real values of indicators can be found under the influence of arbitrary factors. Therefore, we used real data taken for three years as the basis for our calculation. The calculation of economic, social and ecological competitive ability of Krasnoyarsk Territory made us come to the following conclusions. 1. One can refer to competitive advantages such things as powerful natural resources potential and productive potential, effective resource usage, shown by high efficiency of labour and financial provision capability. 2. The key spheres of low and medium levels of competitive ability of Krasnoyarsk Territory are ecology – health care – demography; education – innovative activity; transport infrastructure.

Key words: competitive ability; region; Krasnoyarsk region; competitive ability factors.

P. 140. *Polukhina Oxana A., Ruban Dmitry A.* East Siberian State Technological University (Ulan-Ude), Southern Federal University (Rostov-on-Don). **NATIONAL SCIENTIFIC MEDIA MARKET UNDER CONDITIONS OF GLOBALIZATION AND ROLE OF INFORMATION TECHNOLOGIES IN ITS FORMATION (BY EXAMPLE OF GEOLOGY).** Globalization is the main trend in development of the current science. Technically, it occurs via intense scientific communication, which requires implementation of the newest information technologies. Among the forms of scientific communication, the distribution of research results as publications is of outstanding importance. The scientific media market can be defined as a space, where bodies (publishing houses, institutions, universities, Internet portals, etc.), which publish books, journals, volumes, conference proceedings, and on-line information, function and compete. The role of media market in the growth of geology is especially important because researchers in this field publish many papers annually. Nowadays, the unique international scientific media market already exists. Nonetheless, existence and special development of national media markets remains an urgent task. The national media market provides an opportunity for demonstration of

achievements of a given scientific system, not only as a generator of new ideas, but also as an institution promoting these ideas. Additionally, the formation of the national media market is necessary for the balanced development of the geological science, because this market makes publication of research result of different (by spatial restriction) value possible. Use of information technologies in science grows steadily. From six categories of information technologies, net information technologies are of the biggest importance. Now, an on-line access to scientific editions is a basic criterion determining their position on both international and national media markets. Request for such technologies from scientists depends on the necessity of work with large datasets and also the competence in use of computers and the degree of conservatism of the scientific community. Formation of the national scientific media market with information technologies has, as a rule, two consequences. The first of them is linguistic standardization. The second inevitable consequence of use of information technologies in national (and, particularly, Russian) journals is optimization of peer-review procedure. It appears that Russian journals could provide a ground for discussion of the conceptual problems of geology. This way, they could compete with international journals and, therefore, expand into the international media market. However, a publication of conceptual ideas is sensible only when they are accessible for the international research community. If so, the use of net information technologies, providing an easy access to journals, should be considered as a key factor in the formation of the Russian scientific media market.

Key words: geology; information technologies; media market; scientific communication; globalization.

P. 147. *Spitsin Vladislav V., Monastyrny Yevgeniy A.* Tomsk Polytechnic University, Tomsk State University of Control Systems and Radioelectronics. **DEPENDENCE OF RUSSIAN REGIONS INNOVATION INDICES ON INNOVATION TYPE AND BRANCH-WISE SPECIALIZATION.** There are many international and Russian methods to estimate and compare regional innovation activity. But most of them do not consider regional economic and branch differentiation, which influences innovation indices. The purpose of this work is the analysis of the dependence of innovation indices on regional economy innovation type and branch-wise specialization. The work is based on the Russian regions statistics data analysis. Hypothesis that regional innovation indices will depend on the innovation type predominating in regional economy is put forward and tested. The analysis is based on the authors' methods, which allow finding the regions, which specialise in product innovations, process innovations and other regions; calculating average values of indices of these regions' groups, describing their innovation results; finding out indices, in which the average values differences between regions are non-random, and analyze them. We receive the following results of our analysis. 1. Regional innovation type is connected with regional branch-wise specialization. Product innovations are associated with equipment manufacturing. Process innovations are associated with raw materials industry, metallurgy, coke and mineral oil industry. 2. Distinctions in innovation indices between regions leading in product innovations and process innovations were defined. Regions leading in product innovations have high rates of innovation activity indices but their enterprises suffer from financial difficulties. To solve financial problems it is necessary to form and realize state industry and investment policy and to make export promotion of their innovation enterprises. 3. Regions with process innovations have financial and economic advantages due to their branch-wise specialization. But innovations at these regions' enterprises are usually forced by a parent company or difficult conditions of raw materials extraction. Economic and social effectiveness of these innovations is low. It is necessary to redirect the surplus of these enterprises' financial resource to other economy branches innovation development. 4. According to the regional innovation indices distinctions it is necessary to improve innovation statistics and region-ranking methods. It is incorrect to calculate and compare regional innovation indices ignoring regional branch-wise specialization. Russian regional innovation statistics must form report data disaggregated by industry sectors.

Key words: regional innovation system; innovation statistics; process and product innovations; branch-wise specialization.

PSYCHOLOGY AND PEDAGOGICS

P. 153. *Gomboev Bulat B., Poleva Nadezhda V.* Krasnoyarsk State Pedagogical University. **PROJECT OF WRESTLER'S SPORTS DIARY.** Health is the major and most important human need. It determines not only the absence of disease or infirmity, but also ability to work and ensuring the harmonious development of personality, physical state, mental and social well-being. Health preservation and maintenance of high performance of athletes is possible when the physical and psycho-emotional loads correspond to their adaptive ability. Loads, which are below the optimal level, do not provide the desired training effect; those above the optimum are usually excessive and may give rise to different pre-pathological and pathological changes in the body, both physical and mental. Coaches, supervisors and medical professionals monitor the adequacy of training loads during the preparation of skilled athletes. But the doctor and coaches should not always observe health condition of athletes, because athletes must be able to assess their physical state, functional status of the major body systems, ensuring their availability, and changes in the process of exercise. The coach should ensure a conscious attitude of athletes. Beginning with the first phase of a multi-year training each athlete should be able to control their skills. The athlete must systematically put notes in diary, where s/he will describe not only the intensity of stress and exercise, results in training, competitions, special performance benchmarking, but also such subjective data as well-being, mood, sleep, appetite, etc. The problems concerning these points can be solved with the help of the wrestler's diary. In the mandatory minimum of daily self-reflection the athlete must include the purity of heart contractions. Data obtained by this method are considered to be objective and supposedly reflects the functional state of the organism. However, this method of characterising the load turned out to be unsuitable for the determination of physical fatigue. A.I. Zavyalov proved that frequency of the heart rate at high workload of high-class athletes is not a valid parameter to control the training effect. According to the statements above, we can note the existence of a scientific problem, which describes the need of improvement in training process of wrestlers, developing and implementing a special diary of self-control with a necessary component – the method for determining fatigue, and classification of changes in the electrocardiogram during the muscular load of a healthy person, developed by A.I. Zavyalov. As a result of supervisors' observation the research features of the training process revealed the efficient organization of training athletes for achievement the best sporting result, where it is necessary to develop and implement a sports diary as an adjuvant to control the training process of wrestlers. Using a sports diary for the wrestlers should help to optimize their training process, and to realize the principles of health-technology training fighters.

Key words: self-control; sports diary; training process.

P. 157. *Kochetkova Tatiana N.* Far Eastern State University of Humanities (Khabarovsk). **CORRELATION OF EVOLUTION OF M. BASOV'S VIEWS WITH THE DEVELOPMENT OF NATIVE PSYCHOLOGY.** The article is devoted to the review of creative work of Mikhail Yakovlevich Basov – a Russian scientist who worked at the beginning of the 20th century. The article presents the

periods of the scientist's creative research, the dynamics of his scientific world outlook having an impact on the change of his presentation of the subject and methods of research in psychology. In this publication the author's method of objective observation is examined, as well as the demands needed for the researcher to realize it competently, so that it will let the latter make a competent psychological characteristics of the respondent. Being an apologist of paedology M. Basov promoted the introduction of the idea of a complex (integral) research of personality into the Soviet psychology. Consistently moving in his scientific ideas Basov favoured introducing a new subject of research into the native psychology – activity, due to which the transformation of a human being out of an individual into a personality, formation of his consciousness and self-consciousness, biological and psychological development were realized. Basov argued the reasonability of carrying out the observation of children for studying the periods of their development, emphasizing that they, unlike adults, are always in the process of maturing. The scientist accentuated his attention on the developing of a personality being realized in the society that is why one should study a preschool child in the game process. After introducing the definition “task” M. Basov demonstrated that its orientation influences the character of the fulfilling activity, thereby the activity can carry both a reproductive and a constructive character. Based on this discovery Mikhail Yakovlevich called for teachers to use their various educational arsenal in the professional activity, which will let a pupil and a trainee fulfil the offered action creatively. Starting with Basov's works, which grounded the reasonability of introducing into the scientific research the principles of historical methods, integrity, methods of structure, selectivity and heterochronicity, actual research in the field of child psychology and age-specific psychology started to be realized; age-specific psychology and pedagogical psychology began to develop in harmonic synthesis; the attention of the scientist on the individual features of children, which depended both on the heredity and the society, later became the framework for designing a personality, differential psychology and psychology of sex, psychology of creation, psychology of labour.

Key words: activity; development; personality; observation; game.

P. 162. *Kudrya Olga N., Belova Larisa Ye., Kapilevich Leonid V.* Tomsk State University. **ADAPTATION OF THE CARDIOVASCULAR SYSTEM OF ATHLETES TO VARIOUS LOADS.** Mechanisms of adaptation of the cardiovascular system of athletes to the loads of various types have been studied by methods of Doppler echocardiography, variation pulsometry and determination of enzyme activity in serum. Athletes with a different orientation of the training process revealed differences in the morphometric parameters of the heart, and hemodynamic indicators of the state system of regulation of heart rhythm. Unidirectional change of morphofunctional and hemodynamic parameters was revealed in athletes in the training process, which is dominated by the dynamic nature of the load (of “speed” and “endurance”). Stable adaptation circulatory apparatus to the load of dynamic nature is accompanied by moderate hypertrophy of the myocardium and dilatation of its cavities. Morphological changes are accompanied by increased parasympathetic influences on heart rate and increased adrenoreactivity infarction, which ensures economization of cardiac function at rest and peak performance under extreme loads. However, athletes who perform loads of dynamic nature, but training a variety of physical attributes – speed and endurance, revealed differences in patterns of metabolism. Athletes of “endurance” adaptation of the circulatory apparatus are associated with an increase in aerobic energy production mechanisms, as evidenced by the positive correlation between indices of morphometry and maximal oxygen consumption. For athletes, training speed and power qualities, an important role in the structure of myocardial metabolism processes belongs to anaerobic glycolysis, which confirms the relationship between the revealed morphofunctional indices of myocardium and lactic and dehydrogenase activity. Athletes training in the power load direction show weak signs of the economizing function of the circulatory apparatus. Signs are shown of moderate myocardial hypertrophy without the increase of the functional volume of the heart. Perhaps, the adaptation of the heart muscle to hyperthyroidism is due to the activation of plastic processes and protein synthesis, as evidenced by the high activity of aminotransferases, which ultimately leads to an increase in the thickness of the heart muscle. Hemodynamic status indicators for regulatory mechanisms are within the age-related physiological norms for healthy, untrained men. The structure of anaerobic metabolism increases power and reduces the capacity of aerobic ways of ATP resynthesis, as evidenced by positive correlations between the CK activity and the morphometric parameters; and negative indices between maximal oxygen consumption rates and morphometrics. According to the variation pulsometry, increased parasympathetic influences on heart rate were revealed in groups of “speed” and “endurance”. For athletes, training power quality, the parameters reflecting the state of the system of regulation of heart rate are within the physiological norms for healthy untrained people. Thus, the mechanisms of long-term adaptation of the cardiovascular system to stress of various types are associated primarily with the reconstruction of metabolic processes, which is consistent with the principle of priority to ensure the structural systems that dominate in the process of adaptation.

Key words: morphometry of heart; hemodynamic; regulation of heart rate; metabolism; athletes.

BIOLOGY

P. 167. *Myasnikov Alexei G., Danchenko Matvey A.* Tomsk State University. **THEORETICAL BASIS OF SOUND FOREST MANAGEMENT.** Despite the urgency of sustainable development in the forestry sector and available scientific achievements in this field in Russia and abroad, domestic science has gained a slight amount of research considering sustainable forest management as one of the main factors, which in today's economic conditions contribute to the achievement of sustainable development of ecological and economic systems. Native forest science has a considerable scientific basis, which is not used in practice because of the extensive forestry. To provide scientific forest industry the important and urgent problems are justification of effective economic mechanism to overcome the crisis, stabilization sustainable development and management of forests. Scientists should be most important participants in the development of public forest policy at the regional and federal levels, and in appropriate programs for the forest sector development and sustainable forest management based on it. There are now urgent issues of interaction between nature and society. A number of resources needed to implement the social production began to decrease. There is no doubt that humanity exists at the expense of the environment, and that the biosphere provides the human with all the matter, energy and information necessary for its normal life. Lack of sound scientific monitoring and regulation of the intensive development of the humankind can lead to complete depletion of the biosphere, and make the existence of human beings impossible. In many countries the development of humankind has not been possible due to catastrophic environmental changes. Therefore, the issues of environmental management in today's conditions are highly relevant. There is an important issue of the feasibility of the idea of sustainable forest management in the framework of modern economic organization of forest production and the existing forms of business, which manage forests. Russia's adoption of international economic

community standards in forest resources management means closer integration in the sphere of economic ties (economic, environmental, political). However, in most Russian industrialized regions the methods and forms of forest management are far from matching the above mentioned criteria of a sustainable forest sector development. Therefore, Russia's adoption of international obligations in the field of sustainable forest management indicate its long overdue need to adjust forestry legislation, the structure of forest management practices and economic mechanisms of distribution of forest resources in the direction of their harmonization with the international standards in this area.

Key words: forest resources; sustainable development; forestry; sustainable forest management; forest legislation.

P. 171. *Ilyinskikh Nikolay N., Glukhova Lubov B., Ilyinskikh Yekaterina N., Karnachuk Raisa A.* Siberian State Medical University (Tomsk), Tomsk State University. **CYTOLOGICAL AND CYTOGENETIC ALTERATIONS OF HUMAN BLOOD T-LYMPHOCYTES IN VITRO INDUCED BY ANTI-CANCER DRUG ADRIAMYCIN IN COMBINATION WITH SHIITAKE MUSHROOM MYCELIUM (*LENTINULA EDODES*) EXTRACT.** Protective effects of shiitake mushroom mycelium (*Lentinula edodes*) extract grown in darkness for 10 days against cytogenetic damage induced by anti-cancer drug Adriamycin (Doxorubicin) were assessed in vitro in the human peripheral blood T-lymphocyte cultures. It was found that Adriamycin in the cultured lymphocytes can induce various types of karyopathological alterations including the decreasing frequency of cells with round-shaped nuclei normal for T-lymphocytes and the increasing frequency of micronucleated or protrusion-nucleated cells as well as the cells with apoptosis features like karyopyknosis, karyorhexis or karyolysis. Frequency of binucleated cells has also increased in the Adriamycin-exposed cultures. Alternatively, shiitake mycelium extracts did not result in any types of karyopathological alterations in the treated cultures, but induced the significant increase in the frequency of cells with bean-shaped nuclei and the decrease in the frequency of cells with oval-shaped nuclei. An addition of Adriamycin to the preliminary shiitake extract-treated lymphocyte cultures resulted in the significant diminution of the karyopathologically alternated cells including micronucleated, karyopyknotic and karyolytic cells as compared to the only Adriamycin-exposed cultures. However, the frequencies of binucleated and protrusion-nucleated cells in the Adriamycin and shiitake combinedly treated cultures remained high and unchanged as compared to the only Adriamycin-exposed cultures. Mitotic pathology analysis in the Adriamycin-exposed lymphocyte cultures has demonstrated various alterations in more than 40% of the cell divisions. Among the types of the mitotic pathology, the anaphase bridges, metaphase chromosome lagging or multi-clustered metaphases have dominated. However, any increases in the frequency of C-mitoses were not detected compared to the intact control. It was found that Adriamycin significantly depressed the mitotic activity and blast-transformation of the treated cultures, whereas shiitake mycelium extracts doubled the mitotic activity and increased blast-transformation as compared to the intact control. Moreover, Adriamycin induced the significant decrease in the area of the cultured cells, whereas addition of shiitake mycelium extracts to the lymphocyte cultures resulted in the considerable increase in the frequency of cells with the area more than $100 \mu\text{m}^2$.

Key words: T-lymphocytes in vitro; Adriamycin; mycelium *Lentinula edodes*; blast transformation; mitotic activity.

P. 176. *Sviridova Tatyana P.* Siberian Botanical Garden, Tomsk State University. **BIOLOGICAL FEATURES OF *SAUSSUREA CONTROVERSA* DC. (*ASTERACEAE*) AT INTRODUCTION IN THE SOUTH OF TOMSK REGION.** *Saussurea controversa* DC. is of interest for introduction in culture due to the fact that the elevated parts are used for receiving immunomodulators with a wide spectrum of biological activity. It has long been applied in complementary medicine in the form of decoction from the elevated parts against glaucoma, pulmonary and gastroenteric diseases, as a styptic, and as an anti-rheumatism means. Its fresh leaves heal wounds, especially purulent ones, the ether extract from roots shows antibacterial activity. The elevated part of plants contains vitamin C, flavonoids, rubber, triterpenoid saponins. Introduction experiments were held in 2004–2009 at the experimental part of the Siberian Botanical Garden of Tomsk State University (SibBG). Seeds used for sowing were collected in natural habitat (Altai-Sayan mountain area). The results of the long-term introduction experiment with *Saussurea controversa* DC. in SibBG allowed making a conclusion about a possibility of its successful cultivation in the conditions of the south of Tomsk region. Plants follow a full cycle of development: vegetate, blossom, fructify, give viable seeds the parameters of which depend on the age of plants, arrangement on sprout, climatic conditions of the study year and ways of sowing. The germinating power of *Saussurea controversa* DC. seeds at sowing in a hothouse is higher than at sowing in the ground. Stratification of seeds during a month increases the germinating power of seeds by 1.8 times. Cultivation of plants by seedlings appeared more successful, than by sowing seeds in the ground. The generative period of development of *Saussurea controversa* DC. plants is noted to start on the third year of life. The maximal daily average growth is observed in the phase of blossom. With the years, values of some parameters increase: the number of generative sprouts in a bush, and raw efficiency. The values of such parameters as the height of sprout and seed efficiency also depend on the year of research.

Key words: introduction; *Saussurea controversa* DC.; germination; phenology; growth and developing; productivity.

SCIENCES ABOUT EARTH

P. 179. *Myanganbuu Nyamkhuu.* Tomsk State University. **RELIEF OF THE DARKHAT DEPRESSION.** The Darkhat Depression, one of the greatest depressions situated in the northern part of Mongolia, was the floor of an ancient lake in the Quaternary. At present, it is an interesting geomorphological research area where varied relief forms of different geneses occur. The absolute heights within this depression vary from 1,540 to 1,600 m. This paper deals with the principal characteristics of the Darkhat Depression and palaeogeographic aspects of its development. The paper is based on the analysis of the literary contributions and the present author's expeditionary research on the depression relief during 2003–2006. In the field studies, the primary data on the relief and processes of the depression relief-formation (near 100 km of the total route was passed and forty points were described). Moreover, in the work, topographic maps of scale 1:100,000, geological map of scale 1:500,000, the satellite Landsat-7 multichannel photos were used, the digital relief model was constructed according to SRTM (AsterDEM 30 m). The analysis of the depression relief was performed applying the program ArcGIS; the steepness, exposition, relative height of the territory, its horizontal ruggedness were established. The Darkhat Depression, stretching over 120 km from north to south and 40-50 km from west to east, is surrounded by high mountain ridges: Khardyl-Sardyk and Bayan-Ula, the Shishkhid Upland (Ulan-Taiga) and others. The absolute heights of the ridges vary from 2,000 to 4,000 m. The following genetic relief types are distinguished within the Darkhat Depression: glacial, limnic, eolian, alluvial-proluvial, alluvial, cryogenic, phytogenic and anthropogenic. In the Late Pleistocene, ridges surrounding the depression were exposed to glaciation of the

glen character. Terminal moraines of the Late Pleistocene glaciation in the Darkhat Depression are well-defined in the outflow of the rivers Khugein-Gol and Dzharain-Gol from mountains. The Darkhat Depression, as well as the majority of the mountain troughs in the south Siberia and Northern Mongolia, has gone through the "lacustrine" stage of development, which spanned the period from the Eopleistocene to the end of the Late Pleistocene with interruptions. The reasons of the lakes formation include both the tectonic (warping of depressions) and climatic factors (glaciations and interglacials). The complicated combination of them within the Darkhat Depression governed the specific history of the development of the paleolacustrine reservoir in this region and also the formation of its modern relief.

Key words: relief; intermountain basin; palaeogeography.

P. 183. *Semkina Olga.S., Nepomnyashchiy Viktor V.* Tomsk State University, State Natural Reserve "Khakassky" (Abakan). **STUDY OF LAKE BELE AND LAKE ITKUL LANDSCAPES AS RECREATIONAL LOAD ESTIMATION.** In the article the results of landscape researches on the territory of two clusters of reserve "Khakass" are considered (Lake Bele and Lake Itkul). The uniqueness and originality of the Shira steppe landscapes are designated. This article contains a complex of physical and geographical characteristics of the territory, which includes the protected areas studies: the geological structure, the history of the natural conditions of the northern part of Minusinsk deflection and lake hollows, geomorphology of the area, the climatic conditions of landscape formation, features of soil cover and vegetation are described. The morphological structure of landscapes, types of areas and kinds of natural boundaries are characterized, their mapping is made. In the eastern part of Lake Bele four types of areas including 17 kinds of natural boundaries are allocated. In Lake Itkul vicinities four types of areas including 23 kinds of natural boundaries are defined. The characteristic signs and features of landscapes of both clusters, and also similarity and distinction in landscape structure of clusters "Lake Bele" and "Lake Itkul" are allocated. The comparative study of the recreationally-disturbed landscapes and protected areas is conducted. The main role of steepness and exposition of slopes, humidifying mode in space differentiation of the investigated steppe landscapes is defined. The generalised results of researches of landscapes are given; general recommendations on preservation of the reserved territories in the conditions of the increasing recreational load in the adjoining territories are made. Most often the recreational load is unapproved dumps of household garbage on the territories adjoining to the reserved clusters, infringement of integrity of the vegetative cover and pauperisation of the floristic variety, distribution of commensal kinds of animals, structural change of the soil profile on spontaneously arisen beaches. The dynamics of recreational loads for the non-reserved south-eastern coast of Lake Bele during 2006–2011 is shown. In 2009 the recreational load had the maximum indicators and since then tendencies to its decrease are observed. The paper substantiates the need to maintain the reserve status of the coastal and aquatic areas of Lakes Itkul and Bele. There is also a need to create a geographically and economically organized recreational area on the shores of lakes in order to reduce the harm caused to the surrounding nature reserve by unorganized seasonal summer tent parking and spontaneously arising beaches. The authors recommend using methods of landscape planning and ecological monitoring to create organized recreational areas.

Key words: landscape; lake; steppe; Khakassia.