#### V. N. Bulgakov

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## RATIONAL AND IRRATIONAL EXPECTATIONS IN HISTORICAL CONTEXT OF SCIENTIFIC DEVELOPMENT

The dependence of modern economic development from the effects of personal rational or irrational expectations resulted in economic vulnerability. This state of affairs requires further interpretation, theoretical substantiation and concept development to use both new economic methods for impact control and modern protection techniques in a fast-growing competition. The problem in question has a broader economic importance and its solution may have significant implications for economic science as a whole, when one of its basic values is the rationality of thought and action "focusing around Human significance".

The article describes different approaches that substantiate the concepts of rational and irrational expectations. The conclusion is that rational and irrational expectations which form environment and impose restrictions on the behavioral motives of individuals, affecting the sustainable development of enterprises, the state and society, are the essential characteristics of modern economics.

**Key words:** *rationality, irrationality, expectations, individual, economy, analysis, forecast, mind, reason, efficiency, coordination of interests, approach.* 

### Yu. P. Grabozdin

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## METHODOLOGICAL BASIS FOR QUALITY EVALUATION OF CONSULTING SERVICES

The article substantiates the relevance of consulting services quality development which is considered as one of the major factors, giving the consulting providers the chance to survive in the market. Various viewpoints on the quality of consulting services and its levels were analysed. A model for quality of consulting services from the viewpoints of a provider and consumer was suggested. Law implementation as well as capabilities of self-controlling organizations and inter-corporate standards to control and improve the quality of consulting services were analysed. Current economic methods for quality evaluation of consulting services were studied. The method SERVQUAL, which suggests the mathematic calculation to identify the weight of each single indicator, was recognized as the most efficient.

Key words: quality, consulting service, quality control, service provider, inter-corporate standard.

### L. R. Iksanova

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## FEATURES OF INTELLECTUAL CAPITAL INFLUENCE ON INNOVATION ACTIVITIES

Current dynamic external and internal environment changes, that require constant innovative updating of manufacturing and control technologies, cause the relationship between organization's development effectiveness and available intellectual capital as well as possibilities of its production in the foreseeable future.

The goal of the research is to determine and substantiate the impact characteristics of intellectual capital on innovative activities. In the course of the research an abstract-logic method, comparison, methods of analysis, synthesis, induction and deduction were used.

Due to economic and statistical analysis, the paper suggests the idea of intellectual capital direct influence on innovation process surge in economics. The influence arises due to the fact that the intellectual capital is the essential "driver" of Research and Development: it contributes to the development of territorial and inter-industrial innovation transfers; provides an efficient management of other types of capital to produce the greatest possible innovation effect and encourages industrial cooperation to create new innovation ideas and projects.

Key words: intellectual capital, innovation activities, innovation effect.

### **D. V. Serdobintsev**

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## METHODOLOGICAL AND PRACTICAL ASPECTS OF DETECTION AND FORMATION OF REGIONAL AGROINDUSTRIAL CLUSTERS

The goal of the research is the elaboration of recommendations concerning the improvement of formation and functioning of regional agroindustrial clusters. The main tasks are to consider the basic methods for the identification of industrial competitiveness and agroindustrial clusters, to study practical experience of clusters`activity development, to suggest a step-by-step procedure of clusters`formation of in agroindustrial complex (AIC), to design the organizational structure of a regional agroindustrial cluster.

In the course of doing the research statistical-economic, monographic, logic, design methods were used. Currently the elaboration of optimum methods for identification and formation of regional agroindustrial clusters plays the basic role when solving the problems of effective functioning and increase of AIC enterprises competitiveness.

The paper suggests the techniques for the identification of competitiveness between AIC clusters in Povolzhsky regions. Methodological bases and practical experience of detection and formation of clusters in various branches of economy and agriculture of the regions were considered. The step-by-step procedure of regional agroindustrial clusters construction with distribution of organizational-economic functions between the basic participants was worked out. The organizational structure of the industrial kernel and agroindustrial cluster that serves satellites was developed.

Key words: methodology, practice, detection, formation, agroindustrial clusters, the Volga region.

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# MONITORING OF CASH FLOWS IN CONSUMER COOPERATIVE ORGANIZATIONS

When considering the problem of cash deficiency, the low efficiency of cash attraction and application and scarcity of financial instruments, technologies and mechanisms were recognized as one of its reasons. As financial instruments and technologies are always based on the development of the financial science and practice, their use is especially relevant in the context of financial deficiency. Cash flow management is a tool that results in profit – the desired effect from the consumer cooperative organizations` activities

The article considers the theoretical and methodological background to calculate the uniformity of positive and negative cash flow formation and synchronization in consumer cooperatives and provides recommendations on performance assessment of cash flow intensity and effectiveness when applying the analytical and statistical methods of estimation.

The discussion of the issue enables to determine the reasons and stages of cash turnover slowdown as well as the measures to control the cash flow.

Key words: monitoring, timing, intensity, cash flow.

## Czi Hun

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#### A. S. Yumatov

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## GROUPS OF REGION SOCIAL POLICY ASSESSMENT INDICATORS

The paper in question systematizes the indicators of the social policy efficiency assessment in the region. The list of indicators includes the resource endowment index, health standard index, the economic component of living standards, the funding ratio index, a level of human capital development, living conditions of the population.

This list of indicators forms a basis for a full assessment of social policy efficiency and enable to create a fair presentation of both social development in the region and its position among other Subjects of Federation.

The paper studied the social policy issues in the Orenburg region in 2010–2012, described tendencies in functioning and development of some sectors in the social sphere of the region and determine a level of development of the social sphere of the Orenburg region against the all-Russian indicators.

Key words: social policy, living standards, human capital.

### **O. V. Frolov**

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## **INSTITUTION OF HIGHER EDUCATION AS LIVING SYSTEM**

The reforming of the current system of higher professional education on the market-oriented principles is implemented without taking into consideration its living system properties.

Modern changes in the management of higher education institutions are deeply connected with crisis developments in the sphere of education. Crisis gives rise to the necessity to revise the traditional principles of control policy, which are not sufficient for any institution to develop as a self-organising system.

In the context of a new paradigm the institution is considered as a market participant and an open selforganising system with emergent properties. To manage this system it is necessary to know the principles of synergetics and to apply them properly for the purpose of adaptive potential efficient use.

The application of adaptive potential is identified by the ability of educational process participants to show their potentials, creative management skills, by the satisfaction of their managerial interests and demands, by their determination for the development of educational institutions in the market conditions.

**Key words:** *living system, management system, open self-organising system, self-governing system, social organism, social and cultured organism, management in institution of higher education as living system.* 

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#### V. N. Tarasov

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# ON ANALYSUS OF GENETIC ALGORITH FINDINGS TO ALLOCATE MEANS OF ENGINEERING AND TECHNICAL DEFENCE

The article generalizes the findings of simulation experiment that enables to evaluate the adequacy of engineering and technical allocation method. The genetic algorithm, adapted to the subject area forms the basis for the method. The algorithm was estimated on the postulated object that synthesizes the chemical substances.

The algorithm convergence as well as the opportunity to get the optimal solution was researched, the efficiency of objective functions level of influence and the number of mutations were tested, the allocation of security engineering features with the help of the standard program EASI, that evaluates the sequence of violators' activity interruption, was assessed.

**Key words:** *physical protection system, standard genetic algorithm, graph model, engineering and technical means of security.* 

### L. I. Bezrukova

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## NATURE OF AGGRESSION AND ITS MANIFESTATIONS

The last decades saw the growth of aggression and violence with extreme cruelty, which raise serious concerns in the society and are caused by the external and internal factors.

The prevalence of aggressive behavior and the seriousness of its impact on the human society accounts for the growing interest in the subject. The growth of aggression generates different approaches to identify the mechanisms involved in the manifestation of aggressive behavior. The proposed solutions of the stated problem are very interesting and complementary, enabling volumetric, comprehensive vision.

Aggression is multifaced, contradictory, unpredictable and requires a multidimensional analysis of its nature and essence. The problem is not only to reveal the nature of aggression, but also to identify its foundations and diverse forms.

Key words: aggression, struggle, violence, abuse, good, evil.

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#### A. Yu. Pleshakova

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## CULTURAL AND HISTORICAL CODE OF RUSSIAN EDUCATION (ON THE ISSUE OF BOLOGNA DECLARATION PRINCIPLES IMPLEMENTATION)

The social and pedagogical issues of the Bologna declaration principles implementation in the Russian education take a special place in line of social, economic, organizational and administrative problems caused by cultural, historical and moral divergences of the Russian and European education. The article substantiates cultural and historical code of the Russian education associated with the mentality of the Russian people and embodied in the ideas of spirituality of education, continuous search for truth, aspiration to spirit integrity and conciliarism, humanization of the public relations and moral regulation of people behavior.

**Key words:** Bologna process, modernization of education, westernism.

#### L. N. Dobrokchotova

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## THE EDUCATION OF MORAL CULTURE AS SYSTEM COMPONENT OF PROFESSIONAL STUDENT EDUCATION

The article considers the question of student's moral qualities formation in professional education and training system.

The important characteristics, main stages of moral formation and education process were analyzed.

The important conclusions about the necessity of moral student's qualities formation in professional education system were made, that will ensure the society's need in professionals with high level of moral culture.

Key words: pedagogical process, vocational education, moral education, moral culture.

### M. V. Lutzev

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## **ON PECULIARITIES OF MODERN RUSSIAN DEMOCRACY**

This article considers an important and relevant topic, concerning relations between the government and society in modern Russia. The analysis of the historical development of Russia, especially in the twentieth century, showed that the old models of socio-political system - both the totalitarianism, implying full control of the state over society, the suppression of all personal and the liberal democracy of American style, based on the state's maximum rejection from any control over society, ultimately did not provide progressive and conflict-free development of the country, led it into a deep crisis and eventually to the country's disintegration.

The author of the article sticks to the opinion that the best form of the government that can satisfy majority of the population and provide the progressive development of the country is a moderate authoritarianism based on the traditional Russian values, led by a strong patriotically-minded statesman. The presence of democratic elements in the political regime is admitted.

Substantiating the need for a moderate authoritarian method of governance in Russia, the author criticizes its flaws, but admits its advantages over others.

Key words: authoritarianism, authority, democracy, sovereign democracy, «personal regime».

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## MAN OF CULTURE IN EDUCATIONAL ENVIRONMENT

Modern system of education suggests the image of a graduator as a sociable and intelligent man with proactive attitude. A Man of Culture comes out in the image of a multi-talented personality with a wide range of interests, knowledge skills and needs. The man is open to society, tolerant, shares universal human values and cultural attitudes.

The upbringing of a cultured and creative personality is considered as the main target for both comprehensive and higher schools.

The paper researches the Man of Culture as a free, humanistic-oriented personality, who combines the belief system on the objective world and awareness of a human place in it.

The concept of multicultural education is based on the principles of humanity, cultural congruence, multicultural ability, creativity and social values. The interrelation of these principles identifies the content, forms and educational process in the unity of three modules: cognitive (multicultural knowledge), axiological (multicultural world view) and pragmatic (multicultural communication)

Key words: culture, a man of culture, educational environment, multicultural individual.

### A. R. Salgiriev

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## CONFLICTS IN GOVERNING INTERACTION BETWEEN POLITICAL ELITES IN THE NORTH CAUCASUS REPUBLICS

The paper analyzes political elites in the North Caucasus, their role in governing political processes, their structural principles and characteristics. Elite quality, ways of recruiting and characteristics of their development were considered. The examples of physical liquidation of political adversaries, corruption and clannishness in ethnopolitical elites` activity were provided. Corruption was considered as the main factor, endangering the regional security. Staff recruitment and arrangements are selected according to the patron-protegee principle. From the author`s viewpoint the political elite activity is based on haggling with the federal political and administrative elite: regional stability is promised for benefits, financial flows, tax loosening and other preferences. The paper recommends the activities that will ease the political situation in the region.

Key words: political elites, ethnoelites, the North Caucasus, corruption, conflicts.

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## **GENESIS OF CONCEPT "ADAPTATION"**

The concept "adaptation" is the category that can be used to explain any functioning, both psychological and social. The article analyses the term "adaptation", that is interpreted as a manifold phenomenon, and the history of the concept development.

Due to foreign and national researches the conclusion was made that the concept "adaptation" was borrowed from the biology. The basic ideas, laid and developed in this field, influenced the development of the concept in other scientific disciplines, including philosophy, psychology and sociology.

Any approach to the research of adaptation makes a contribution to the research of this process: peculiar views of its nature and functions as well as criteria of success. However, analyzing the development of the concept, the author sets the tendency for the specification of the concept: that is the transition from the homeostatic approach to the subject-activity one.

In view of modern ideas adaptation is the property of a living system, that's why it can be characterized not only as an accommodation, but also as a transforming activity. Adaptation is a target-oriented process of living systems' accommodation to different internal and external conditions, to natural and social environment.

**Key words:** *adaptation, adaptivity, adaptive system, genesis of adaptation, stress, subject and activity approach, system approach.* 

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# CARCINOGENIC RISK ANALYSIS UNDER INFLUENCE OF ENVIRONMENTAL FACTORS ON POPULATION HEALTH IN CITIES OF ORENBURG REGION

The goal of the study is the assessment of the carcinogenic risk to public health in major towns of the Orenburg region, as well as the total score and individual cancer risk. Due to a dynamic, long-term control over air, drinking water and food chemicals in the towns of the Orenburg Region, the total and individual cancer risk from contaminants` exposure was estimated.

The total carcinogenic risks in the multimedia chemicals exposure, as well as the proportion of each substance in the formation of risk were determined. The findings enable to conclude that the metropolitan areas are unfavorable, concerning carcinogenic risk development.

Key words: total cancer risk, individual cancer risk.

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## ENERGY TECHNOLOGY MODERNIZATION OF PRODUCTION AS FACTOR OF BUSINESS SUSTAINABLE DEVELOPMENT

Energotechnological modernization of production is a prerequisite for the functioning and development of industrial enterprises in the competitive environment. Most large companies have already developed the tools of planning and project and process implementation in the field of modernization. Small and mediumsized enterprises, on the contrary, do not pay enough attention to this kind of issues and lack methodological approaches to energy-technological modernization.

In this regard, the article suggests a methodological approach to energy-technological production modernization based on two fundamental principles: efficiency and complexity.

During the planning phase of production modernization one of the key stages is the identification and assessment of economic effects, which will enable businesses to create additional cash reserves, as well as form background transition to a new level of company production and development that consolidates a stable position with respect to competing companies.

Within the frames of production modernization economic efficiency evaluation, an optimization model for predicting repair costs enables small businesses to improve the accuracy of calculation and output cost prediction.

The suggested methodological approach was tested in the company "BAM", LLC (Russia). The implementation of this approach enables to generate the preconditions for permanent positive changes, aiming at expansion and maintenance of company's competitive advantages.

**Key words:** *modernization of production, energotechnological modernization, energotechnological modernization project, energy efficiency, operational costs, operating costs forecast.* 

### D. A. Kon`kin

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## POTENTIAL FOR DEVELOPMENT AND DEVELOPMENT CONTROL OF POWER ENGINEERING COMPANIES AS INDEX OF SUSTAINABLE DEVELOPMENT

When planning energy strategy of sustainable development it is important to determine clear emphasis and provide the basis for the development of a long-term national power engineering. Taking into consideration the fact that the Russian Federation has got enormous underutilized potential of energy efficiency, that enables to solve the problems of economic growth, the author emphasizes the importance to be aware of the consequences of dual development of power engineering sector. On the one hand the sector provides Russia and other countries with energy, on the other hand it generates negative impact on environment. The paper studies the constituents of power engineering companies sustainable development balance and suggests step-by-step system to evaluate its potential.

Key words: economy, sustainable development, power engineering, engineering efficiency, indices.

### I. G. Kirin

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## ON EFFICIENCY OF PHOTOVOLTAIC CONVERSION OF LASER RADIATION

The article presents the analysis findings of the laser – electric conversion efficiency. The laser radiation conversion efficiency with a photo converter, which band gap corresponds to the converted frequency, may achieve 70% with the Solar irradiance level in this sector. When radiation rate increases till optical radiation concentration rate  $\kappa = 5 \div 8$  the coefficient of efficiency rises, reaching the values close to 100% on condition that the photocell thermal mode is maintained.

**Key words:** *laser radiation, photocell, photovoltaic conversion, conversion efficiency, laser wavelength, laser spectrum width, heterostructure.*