

State University – Higher School of Economics
with participation of the World Bank and International Monetary Fund

VIII International Academic Conference
«Modernization of Economy
and Public Development»
April 3–5, 2007
Moscow

Evgeny Yasin

MODERNIZATION AND THE SOCIETY

Moscow, 2007

Contents

1. How the world is changing	4
1.1. Modernization: what does it mean?.....	4
Capitalism and modern economic growth	4
The postindustrial stage and a new balance of power	6
1.2. Five civilizations	8
European civilization	10
East Asian civilization.....	10
India	11
India and China—different paths?	12
Tectonic shifts in the world economy	13
Latin American Civilization	16
Islamic civilization.....	18
1.3. And what is there in Russia?	19
2. Conditions of innovative development and the necessary institutional changes	22
Freedom of creativity	22
Freedom of enterprise	25
Competition	25
Education.....	27
Science.....	29
Industry of innovations	34
Full set of conditions required.....	35
3. Culture	37
3.1. Social capital.....	37
Credibility level: Russia and the world	38
Social cynicism.....	40
Confidence in public institutions	41
Credibility radius.....	44
Responsibility and participation	46
3.2. Civil society.....	48
3.3. Culture matters	50
Definitions.....	51
State of culture today	54
Comparing universal values: three international projects.....	56
Value trends in modern Russia	58
3.4. Measures of trust	61
References	64

The key question that the author of this report is asking himself is the following: Russia needs to modernize, but is the Russian society willing to accept modernization? This question has been extensively discussed in the recent years. According to the majority, the Gaidar reforms, a shock therapy undertaken to transform the economy from planned to market-oriented, have proven unsuccessful, and the society was not ready to accept them as they were too radical. This opinion has become commonplace. But later, when it became clear by 1999 that the key challenges of the market reform had been resolved, new challenges arose—economic modernization, democratization of the political system—then again they started saying that the society is not ready for democracy, that business is irresponsible, and citizens are not willing to take an active part in public affairs. There are other opinions as well: Russia does not need to modernize at all, it is more important that it keeps its traditions, its identity, and its original culture. Therefore, first thing we need to agree on how we understand modernization, and whether Russia really needs such modernization.

1. How the world is changing

1.1. Modernization: what does it mean?

Clearly, by the end of the Soviet era Russia was noticeably behind the developed countries in technology and technical engineering (except for a few areas associated with defense) and even more so in terms of well-being. The growing gap was more and more painfully perceived by the elite and finally became the key cause for the beginning of transformation. But it is not just a matter of replacing equipment or updating products. We are talking about achieving global competitiveness for the country as a whole and a fairly wide range of sectors to ensure its sustainable development and a position it deserves among the most prosperous nations. To achieve that, making a few products better than others is not enough. Productivity needs to boost to the highest level. In addition to state-of-the-art equipment, you also need people with up-to-date competences, highly educated and well motivated, included in a system of social interactions that ensures low transactional costs. Therefore, this is not about modernizing just the economy alone but the society at large. This is what causes resistance since a significant part of the population would like to live a better life, but does not want changes, is afraid of them, particularly when they make you change your lifestyle, make an effort.

But modernization becomes compelling not only due to the transition towards a market economy, but because of the changes that are happening in the world and the challenges that this country has to face.

Capitalism and modern economic growth

A lifestyle that used to be steady for centuries in Europe began changing at a faster pace in the XVII–XVIII centuries. Table 1 below borrowed from E. Maddison shows the implications of these changes.

The changes were primarily in the development of market relations, free trade, private ownership, and competition.

Table 1. Average annual GDP and population growth rates in Western Europe and the world from 1000 to 1998, %

	Periods			
	1000—1820	1820—1913	1913—1998	
GDP				
Western Europe	0.3	1.9	2.4	
World	0.22	2.1	3.0	
Population				
Western Europe	0.20	0.73	0.47	
World	0.17	0.59	0.41	
GDP per capita (in international dollars, 1990)	Years			
	1000	1820	1913	1998
Western Europe	400	1232	3473	17 921
World	435	667	1510	5709

Source: [Maddison, 2001, p. 267, 242, 264].

They finally resulted in a huge flow of innovations that soon transformed the world's image and in something that was later called the modern economic growth. England and Holland were pioneers later joined by other major powers—France, Germany, USA, and finally Japan and Russia.

The rapidly growing power of these countries led to a wave of colonial acquisitions and two world wars for the repartition of life space. The countries that failed to join in the race and continued with their usual invariable course fell victims to aggression, humiliation and defeat.

Essentially, the gap in the level of development and well-being between the leading countries, all from Europe and America plus Japan, and the countries that kept a traditional agrarian economy and feudal social arrangements, consisted in the fact that the former entered the era of industrialization and urbanization earlier than the latter. But then the fruits of industrial economy and technology became gradually available in other countries, and they too followed in the steps of industrialization, one after another.

Like Japan, in joining the developed industrialized countries Russia was still noticeably behind them by the beginning of World War I, primarily in terms of those relations that created the development momentum and laid the foundation for modern economic growth—let us remind you that we are talking about market mechanisms, private property and competition, as well as the supporting institutions (supremacy of law, independent judiciary and democratic political system). But Russia was seeking other ways to catch up and finally found one in the form of planned economy, industrialization at the expense of the peasantry, and totalitarian political regime.

For some time it seemed that the model adopted for closing the gap, or the catching-up development model as they called it later, was being successful and could present an alternative to market economy. Many countries tried to implement it. But eventually it became clear that the Soviet system is flawed and cannot compete with the market economy. After World War II and definitely starting from the 1970s it became apparent that the model was a failure and would inevitable collapse sooner or later.

Meanwhile, Japan and Germany, defeated during World War II, as well as France, Italy and other European countries managed to achieve significant progress in closing the gap between them and the USA, which developed during the war and postwar years. The Japanese model was particularly interesting. First, it presented a clear alternative to the Soviet model—market mechanisms with a strong influence of the state and use of traditional social structures for mass industrial production. Second, their model became an example for other East Asian countries to follow—Taiwan, South Korea, Hong Kong, Singapore, Malaysia, and Thailand, who made sure they can match Western methods with inexpensive and quality workforce, the ability to adopt and reproduce borrowed technologies and export to the open markets of competitor countries. Later they were joined by China, who replaced the Soviet model for the Japanese, and India who abandoned, as late as they did, the attempts at using Soviet methods in combination with democracy and setting out on the path of economic liberalization. The second and third waves of successful industrialization were coming. The catching-up development in these and some other instances started bringing about important achievements.

Meanwhile, the developed countries, the leaders, encountered some new phenomena. Their growth rates turned out noticeably lower than those in the catching-up countries, and manpower much more expensive. Their competitiveness in the sectors of mass production started falling. Concurrently, the population reproduction pattern changed under urbanization conditions: the population aged, and the process of depopulation triggered in a number of countries. Innovations became the primary driver of the economy. But maintaining competitiveness based on constantly updated high-quality products and high prices involves considerable uncertainties, inherent risks and strains. Innovations were mostly produced in the West. The catching-up countries, except Japan and Korea, were not yet able to compete with them on this field but were constantly snapping on the heels of the leaders raising brand new challenges, more and more difficult to address.

The postindustrial stage and a new balance of power

Figure 1 outlines the growth dynamics of the major countries or groups of countries that make up the bulk of the world economy. The figure shows that those who had started on the path of accelerated growth in the past slowed down later, once industrialization was complete. Then other countries took turn in making the leap. They followed the same pattern, each country with its own peculiarities. Some are still in the industrialization phase, rapidly growing and yet to see the saturation phase.

The essence of saturation is when extensive growth factors become exhausted, primarily the flow of manpower from rural to urban areas, from agriculture into industry and other sectors, the demographic profile changes, and a certain limit is achieved in borrowing technologies, demand develops for proprietary innovations. Therefore, we can assume that a reduction in growth rates for all countries except for the leaders implies the need to move to innovative development, whereas the leaders have already completed the transition. The question is to what extent different countries or different cultures and social systems are able to compete on the innovations field.

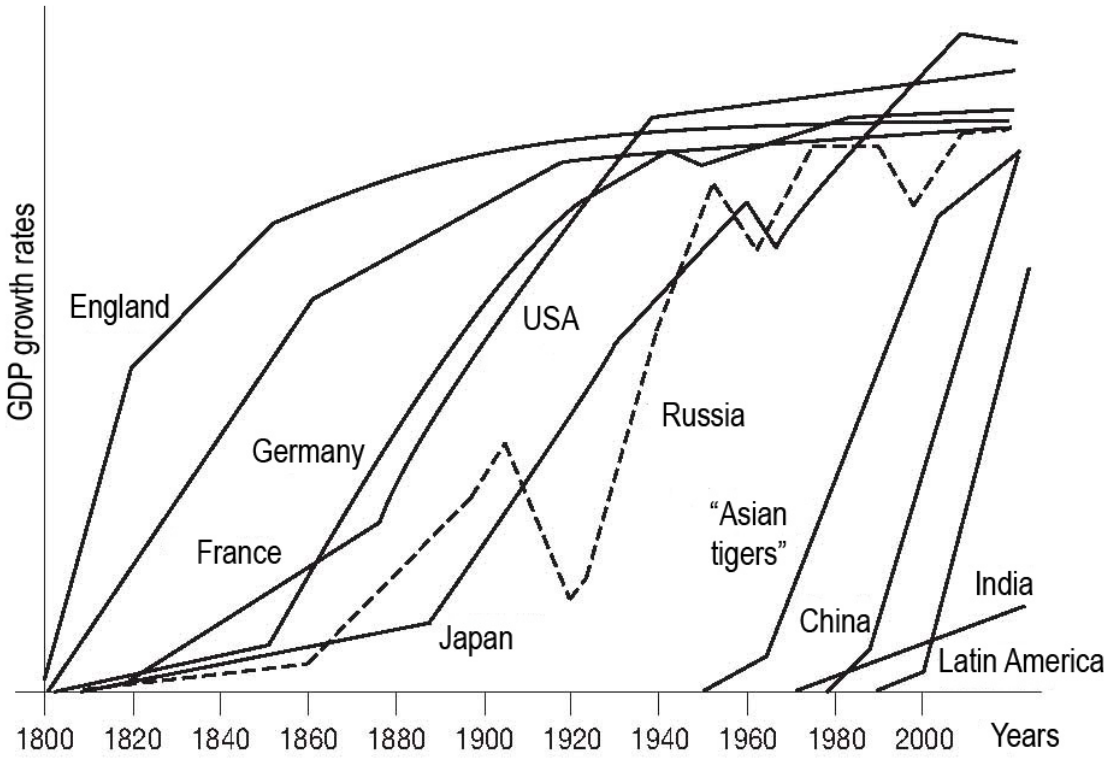


Fig.1. Development dynamics of major countries or groups in 1800—2005

Another hypothesis that appears unforced is that the industrialization era takes the human civilization to a brand-new level of development—from an agrarian economy that dominated for thousands of years to an economy of innovations or communications (whatever you call it), which is also likely to be fairly stable, at least less fraught with revolutions, technological or social.

The end of the industrial era also implies changes in the demographic profile: from large to nuclear families, from a rapid growth of population to a stationary or even diminishing population, to a growing life expectancy and aging population. What is particularly important is

that countries experience the transition as they industrialize and urbanize, so that their share in the total population and global production changes in favor of the least developed countries.

There were times in the 1950s when these problems were not as acute, and a calmativ theory dominated: sooner or later, all countries and nations will go through the industrialization stage, and a pattern of stationary population will become established everywhere with the same percentage of children and senior population. Tadjikistan, a republic with a high birth rate and rapid population growth, will boost its economy and well-being and level off demographically with Latvia where the Russian population has a higher birth rate and the depopulation of the Latvians became a real threat already in the 1970s. Life has shown that not everything is that simple.

It is precisely a fact that the agro-industrial transition is an extremely non-uniform process that brings about severe strains and cataclysms in relations among countries. First, under the temptation of growing power leaders seek to redistribute the world in their favor. The contradictions between the former and the accelerating "chasers," as in the case of England and Germany, became one of the primary causes of World War I. World War II was also between the developed industrialized countries, but this time involved the periphery as well. The recent confrontation between two blocks, two ideologies, is still circulating in the framework of perceptions of a world where the circle of strong industrialized powers capable of managing it is pre-defined. Each of the superpowers enlists allies ignoring that the effect of supporting them is, more often than not, much less than the costs.

But then we can see the collapse of a colonial system that took 200 years to build. China, India and a multitude of other countries gained independence. China built momentum with high growth rates starting from the late 1970s when Deng Xiaoping introduced his gradual market reforms, and same India starting from the 1990s. Even prior to that, Japan had started demonstrating its "economic miracle" in the beginning of the 1950s, winning markets with high-quality products. In essence, its model of catching-up development has been used by the "Asian tigers"—South Korea, Taiwan, Singapore, Hong Kong, as well as Malaysia and Thailand. Unlike Japan, where industrialization started earlier and was interrupted by World War II, they underwent industrialization virtually from scratch, always under rough authoritarian regimes (or foreign administration, like Hong Kong).

Visible shifts also occurred in other parts of the world, less dramatic, though. Latin America developed noticeably slower, no "miracles" observed. At times, Islamic countries achieved high rates, but only those producing oil, and with no significant impact on their social or economic structures. No innovation-related achievements have ever been noticed in any of those countries. That is also true for the above East and South Asian countries, except for Japan and, perhaps, Korea.

As previously noted, the developed countries that completed their industrialization period and entered the post-industrial era, still leaders of innovation, changed their demographic profile as well: the population ages and either does not grow in number, or diminishes. That is why the period of the post-war economic boom took place when favorable conditions were created for immigration, thus generating the current complicated problems of polycultural society. Japan had a similar picture, only no immigration of any significant scale has been noted there as of yet. The Japanese are expecting the population on its islands to fall down to 90 million people by 2015 compared to 120 million now [Daily Jomiuri, 2006, 22 Dec] and intend to make agreements with some neighbours, which will cover immigration issues.

The Chinese population is growing at a relatively slow pace, but this is the consequence of a long-standing restrictive government policy that has long generated severe problems, but still remains unchanged due to overpopulation concerns. However, rural population is still the majority here,

willing to move to the cities as soon as jobs become available there. Therefore, there are still great opportunities for industrial growth there.

It is quite different in India and other South Asian countries, Islamic countries, Latin America and Africa. India is the only country to have seen an acceleration of economic growth in recent years, mostly modest, while the population is growing rapidly; the number of births per woman at reproductive age is 3 or more whereas in Europe, Japan and Russia it ranges between 1.3 and 1.8. A surplus of manpower can be observed, problems with employment; the bulk of incremental GDP is absorbed by new mouths and cannot be directed to development. These are the countries where flows of migration come from moving towards countries with low population growth rates.

The question arises: what are the reasons behind such differences? Why are some countries among the leaders, including today, in terms of innovations? Why do others achieve high growth rates but rely primarily on technologies from the leaders? Yet others have high rates of population growth and a soft economy? Would it be fair to say that the differences are conditioned by a country's stage of development, government policy or just a set of circumstances, fortunate for some and less fortunate for others? Or perhaps we should still explain at least part of these differences by other factors, e.g. by differences in institutions and culture? There are valid reasons to believe that these are the ones that determine the differences between civilizations and levels of development.

Of course, differences in mentality, character and culture are important. This is obvious now. But such an answer is insufficient. Acceptance of this fact may find its expression in a passive conclusion: yes, this is what we are, this is our mentality, no flying from fate. If the citizens of certain countries, certain cultures want to live better at home, they should understand what determines their lagging behind, can they catch up, what institutions and elements of culture need to be changed, what and whose efforts will that require.

1.2. Five civilizations

Let us try to use the concept of civilization. It is true that A. Yanov throws critical arrows at all those who use it assuming that, like in the times of ancient Rome, there is only one civilization and it is opposed by barbarians [Yanov, p. 54—64]. It is the one European civilization today. However, this approach will not make it possible for us to understand the differences in cultural habitats that exist in the world today, and evaluate their prospects and creative potential. Even though at the same time the issue of the level of cultural development is clearly brought up for discussion.

Let us agree to understand civilization to mean the totality of countries and peoples united by common cultural properties, similarity of languages, institutions, values, and commonality of historical destiny.

In the broadest sense, allowing exceptions, overlaps, boundary structures, let us single out five major civilizations out of those existing in the world today¹:

- European, including North America, Australia and New Zealand;
- East Asian, including Japan, Korea, China and countries of the Chinese world (Taiwan, Singapore);

¹ The sixth civilization is Sub-Saharan Africa. But I do not have data for that and do not have to consider it for the purposes of this work.

- South Asian, primarily India;
- Islamic (from Indonesia in the east to Marocco in the west);
- Latin American.

Each numbers some 1 billion or more people.

Table 2 shows their principal characteristics under two key indicators:

- industrialization complete or not complete;
- predominant demographic profile.

Table 2. Major civilizations and characteristics of their modern development

Civilization	Industrialization	Population	Notes
European	Complete	Not growing	Japan—European scenario
East Asian	Rapidly underway	Not growing	
South Asian	Rapidly underway	Rapidly growing	Large traditional sector
Islamic	Slowly underway	Rapidly growing	Large traditional sector
Latin American	Slowly underway	Rapidly growing	Large traditional sector

Table 3 shows a forecast of the World Bank for the major countries of these civilizations up to the year 2020. The identified civilizations may be complex, composite, and their parts also pretend for an independent civilization role. And by individual countries great differences can be noted as well. But the selected criteria allow distinguishing the most general and comparable development characteristics for each of them.

Table 3. World Bank forecast of economic and population growth rates in 2005–2020, average annual %

Civilizations and countries	GDP	Population
European civilization		
European Union-25 and the Free Trade Association	2.3	-0.1
USA	3.2	0.7
Canada	2.6	0.4
Australia and New Zealand	3.5	0.7
Former USSR	3.2	-0.1
East Asian civilization	1.6	-0.2
Japan	6.6	0.6
China	4.7	0.3
Korea	4.3	0.4
Hong Kong and Taiwan	4.9	0.8
Singapore	4.6	0.5
Vietnam	5.4	1.1
Philippines	3.5	1.5
South Asian civilization		
India	5.5	1.1
Rest of South Asia	5.0	1.7
Latin America		
Brazil and Argentina	3.6	1.0
Mexico	3.8	1.4
Rest of Latin America	3.3	1.3
Islamic civilization		
Middle East and North America	4.1	1.6
Indonesia	5.2	1.1
Malaysia	5.6	1.4
Highly developed countries	2.7	0.2
Middle-income countries	4.5	0.8
Low-income countries	4.7	1.5
World total	3.1	0.9

Source: [Martin et al. 2006].

We will subsequently use the materials of the international symposium—*Growth of future giants? BRIC Anatomy*—arranged by the Emerging Economies Institute of JETRO, the Japanese Foreign Trade Organization, in conjunction with the World Bank and Asahi Shimbun newspaper on 20 December 2006 in Tokyo. The presentations made at the symposium are of direct interest for our topic. The speakers at the symposium represented three leading countries of the above five civilizations: Jang Chun from China, Murali Patibandla from India and Joa Ferras with colleagues from Brazil. Other speakers included prof. Ellis Amsden of MIT and Will Martin of the World Bank. With their help, we will try to understand the key characteristics of the modern state of these civilizations.

European civilization

Industrialization is completed in all the countries of the European civilization, all the countries have a predominantly urban population. Generally, it is not growing (or is slightly diminishing, or as slightly growing).

The key institutions of the European civilization include open market economy, networked economic arrangement, private property, protection of individual rights and ownership, performance of contractual obligations, supremacy of law and independent judiciary, economic and political competition, freedom of speech, meetings and associations. These are the principles of market democracy, far from being perfectly implemented, different in productivity in different countries. These institutions, in their totality, have proven their merits compared other institutional systems. Each time, the European civilization is denounced either a crisis, or decay and death. But these forecasts are always refuted with the same coherence, and the European civilization emerges each time from yet another crisis with a new charge of energy. These institutions in their totality create a rare combination of stability and dynamism, hence crises and scandals, inevitable due to their own properties, are eventually outlived and finally serve the development—developed economy, democratic system, high well-being ("the golden billion"). The culture of this civilization is usually associated with the Judaeo-Christian religious tradition.

It would also be correct to say that it is associated with the ancient civilization and a rationalist-secular world outlook. The latter throws back to the ancient culture, but has acquired particular importance with the blossom of science and philosophy, which are trying to give a logical scientific explanation in the new times to the phenomena of nature and science without resorting to the transcendent arguments of faith and mysticism. Today, thanks to the prevalence of this world outlook, it is the countries of the European civilization that achieved high levels of innovative activity and well-being.

East-Asian civilization

The East-Asian civilization is nothing if not China. Japan is its organic part by cultural parameters, but having shared the features of the European development scenario it has shown a high innovative potential as well. Thereby, followed by Korea, Hong Kong, Taiwan and Singapore it has proven the aptitude of its culture for achievements. But China, which holds some 90% of the region's population, is still in the industrialization process. The population grows slowly due to administrative restrictions. However, according to the Chinese themselves, if the "one family, one child" policy adopted back in early 1980s was discontinued today, it would not lead to a significant growth of the population. The foregone family regulations are blasted, and new arrangements are the order of the day. Nonetheless, China still possesses virtually unlimited resources of cheap manpower flowing from rural to urban areas. The percentage of rural population decreased significantly, but it still makes up 60% of the total population. In spite of the

rapid growth, unemployment in the cities and agrarian overpopulation are a most acute issue in China.

Authoritarian regimes dominate in all the countries of the East-Asian civilization. Even the Japanese one-and-a-half-party political system is under suspicion: although the key democratic institutions appear to have demonstrated their ability to perform, the important role of informal institutions in the Asian society should not be ignored. For Japan in general, as well as for other countries of the region, deeply rooted traditions of hierarchical establishment, subordination in the family, community, organization, and government are characteristic features. According to Confucius' ethics, the inferior should obey, but the superior are responsible for those they patronize; responsibility is the basis of legitimacy of power. Li Kuan Yu, the famous Singaporean leader, believes that democracy in the Western sense does suit the East-Asian culture at all, and the lack of such has never impeded the development of the countries in the region.[Li Kuan Yu, 2005, pp. 464-466].

But recently in Japan and other most developed countries of East Asia the hierarchical tradition has been coming under increasing questioning with the spread of market relations and the rule of law, which make it objectively possible to live without hierarchy, at least outside an organization.

Another specific feature of the East-Asian civilization is latitude in religion and, perhaps, low devoutness. In all of these countries Buddhism has many adherents and in China, in addition to that, Taoism nourished by national roots. But if you look at a number of its features, this is not exactly a religion: there is no anthropomorphous god, the main divinity is the path the man is supposed to find and pass in a dignified way, not necessarily deedful. Taoism has an author—the great philosopher Lao Tze (who wrote the treatise "Tao Te Ching—The Book of the Way and its Virtue " in 580-500 BC). Confucius (551-469 BC) is even more renowned. He created an ethical system still accepted to varying degrees across all of East Asia. Besides, multiple faiths are widespread. The incurved roofs and high doorsteps of the Chinese pagodas are intended to warn of the appearance of evil spirits that legendarily move only in straight lines.

Shinto is another national religion widespread in Japan along with Buddhism. But there was no religious fanaticism or religious war in these countries, with some minor exceptions. The exceptions include Emperor Tsin Shi Huangdi's persecution (221-210 BC) of the Confucius' followers as well as the mutiny of the Taiping advocates of Christianity and the boxer rebellion (against the spread of Christianity).

Therefore, unlike Islam, the East-Asian civilization does not stand out because of its religious features. The definitive feature is rather the "rice culture" that requires hard systematic labor, care and patience.

India

The South-Asian civilization includes India, Sri Lanka and Nepal. Once under the British dominance, these countries accepted the key features of the British law (common law). The national and linguistic diversity made them keep English as state language, language of the bureaucracy and the educated class. Today, this is a competitive advantage in international trade and cooperation.

Industrialization in the modern sense of the word began in India during World War II. Before that, colonialism kept colonies in a position of sources of raw materials and markets for finished goods from the metropoly for a long time. Upon gaining independence, India followed a socialist-oriented model of catching-up development for many years, aiming at import substitution with severe restrictions to open market economy. Many industrial enterprises came

into being during that period, but growth rates generally remained fairly low. Only after the transition towards more free market economy in the mid-1980s and with the opening of the economy in 1991 the growth accelerated achieving an average of 6.5% per annum over 1990-2004. Industrialization gained speed. India's achievements in information technologies are well-known. Bajaj, an Indian company, started manufacturing world-class motorcycles squeezing the Japanese Honda out of the domestic market.[Patipandla,2006]. In competition with foreign firms Tata Motors developed an advanced state-of-the-art ultra-cheap car adapted to Indian conditions (poor population and bad roads) with all the chances to win South-East Asian markets.[Economist,2006.16.Dec.]. The Indians are demonstrating a high level of entrepreneurial spirit and innovation both at home and internationally. A strong middle class of some 200 million people has emerged in India today.

On the other hand this civilization is under a very strong influence of traditional ways. Religion plays a very important role here often causing inter-religious clashes. Hinduism is the primary religion; and then there is Buddhism and Islam. 67% of the population reside in rural areas, 35% have an income below the lowest standards of minimum subsistence. To a large extent, this is not only a result of colonialism, lack of capital, low educational level, high birth rate, but also traditional institutions and culture. G. Murdal (*Asian Drama*) wrote convincingly about that some time ago, and since then the situation did not change much.

India is a democratic country; perhaps, the only one out of the poor. There are plenty of explanations to that. In particular, some talk about the British legacy that brought multiple countries into one state by way of a Constitution, language and lines of communication; and the founding fathers of independent India managed to preserve that legacy. Others mention the role of the traditional caste system, which was formally abolished, but informally continues to exist and practically excludes a significant part of the population from political life by supporting some kind of eligibility qualification of origin. This democracy turns out to be elitist, which makes it effective, though. Beyond the modern sector, these circumstances may create significant impediments for the development of the traditional sector. While this civilization, like China, is going through the industrialization phase, institutional and cultural issues can wait. But with time, they will aggravate.

India and China—different paths?

Different Paths is the title of an article from the Economist cited above, the subtitle is *While the Chinese Are Copying, the Indians Are Inventing*. It tells about the development of an ultracheap car by Tata Motors mentioned above. But behind this case is a sensation in the world of experts who expected a similar step from the Chinese, the world's third largest car manufacturer. But it was India that did it by abandoning the idea of reducing the price of existing models and offering a brand new one. Far-reaching conclusions are being made from this sensation: which of the two catching-up development models—Chinese or Indian—proves to be more efficient. Between the two models are not only political differences, but different institutional systems built in the course of modernization of these countries.

The Chinese model, more popular in Russia, now relies on the state and state-owned companies as well as on foreign investment raised on the terms of local production of components, transfer of technologies and exports of a certain part of products made in China. Two thirds of Chinese exports to the US, which exceed \$200 billion a year, consist of products manufactured by companies built by American investors.[China-Daily.2006.29.Dec.]. They are happy to have a chance to make products that already exist, say, in the US and do not hope to create something of their own straight away, let alone something original.

Just like in other countries of catching-up development, the government role in the Indian economy was also significant, yet private initiative was at the heart from the very beginning of independence. This was laid down back in the colonial times together with other British institutions. J. Neru's policy was a version of Fabian socialism—an active state, large public sector, and import substitution. However, thanks to early industrial development there was a large class of modern entrepreneurs in India by 1947 that nobody suppressed or nationalized. Private business coexisted with state companies and large federal landownerships because the land reform was postponed. A peculiar kind of bisectoral economy was formed.

While a carrot and stick policy was applied to business in Japan and Korea, the Indian principle was that of carrot and bribe, putting it in the words of M. Patibandla. [Patipancela, 2006, p. 6]. Patibandla calls the big family empires that emerged under state custody "incubatory". They gained momentum under the protectionist policy of import substitution, diversified and influenced many sectors and, what is natural, tried to influence the government policy in their own interests. But when the problem matured, the Indian leadership, unlike the Korean (Pak Choi Hi) or Russian (Putin), did not conflict with the business or bring about repressions, but opened up the economy to transnational corporations. Incubatory companies found themselves in a competitive environment overnight. They grew as bulky, hierarchically arranged structures, similar to state companies, but to survive they had to restructure to meet the requirements of modern management. Or they would die.

This is, in fact, the difference between the Indian model and the Chinese one. Private initiative and international competition against state custody. The outcome is innovations instead of copies, better efficiency. The above examples of Bajaj and Tata Motors attest to this conclusion. Here is another example. Infosys is India's most widely known success story. They started offshore programming in the 1980s. The appearance of the American Texas Instruments was conducive to that. There was no demand in India itself. They had to join the international competition in a market that emerged recently, though. But they needed considerable capital. Four middle-class technocrats started the business without any third-party financial assistance. They were helped by the boom on the international IT market and the devaluation of the rupee. Today, this is a benchmark for success on the software market.

China has similar examples as well. So far, however, summarizes Patibandla, China has been achieving 8% annual growth rates and saving 45% of GDP, while India grows at 7% with 20% savings. China mostly borrows Western technology and products, while India can be acknowledged to have innovative products of its own emerging with international competitiveness.

What is also true is that India has a heavier traditional sector. All the achievements are outside it. The modern sector, like Infosys, is associated with the world market rather than the domestic national economy where two thirds of the population continue digging into the soil as 200 years ago. In this sense, the Chinese model is, perhaps, more organic: it is not racing for efficiency; there is no goal to win the international competition for innovations, the focus is on exporting labor-intensive and inexpensive products, even though increasingly sophisticated.[Martin et al., 2006; Rodric, 2006]. Competitiveness is achieved through cheap labor. Incidentally, that is the key competitive advantage of the Indian economy, too.

Tectonic shifts in the world economy

The presentation by Will Martin and his colleagues [Martin, 2006] provides imitation model calculations of Chinese and Indian growth impact on the world economy. Table 4 below shows—some of the results for the impact of these countries' export growth on the trade of other countries and regions of the world as well as their export growth based on product quality of the

manufacturing industry (in bold) in 2005-2020. The authors indicate that this is not a forecast, but a kind of an experiment to help understand the implications of a combination of several key factors that are important for the world economy.

If the assumptions built into the model hold true—and they are sufficiently reasonable—exports of key goods will decrease in all major centers of the world economy, including those from Europe and USA, Japan, Latin America, Middle East and North Africa. In the event of an expected improvement in the quality of Chinese and Indian goods this reduction will be even greater. For instance, provided the quality improves in China and India, electronic exports from the US will decrease by 11% instead of 3.5% in the absence of any quality improvement.

Decreasing exports from Russia and the former USSR with respect to light industry goods (textile, clothing, leather) will hardly be tangible due to their insignificance, but will be—noticeable in machinery, equipment and electronics. Much more substantial is the fact that the products of the domestic manufacturing industry will have much harder time working their way into the world markets with domestic competition growing as well. Timber and metal will be an exception with demand from the growing Chinese and Indian industries.

As we can see, the Chinese and Indian economic growth in the coming decades will present a serious challenge to all countries, and the world economic structure will change dramatically. Many countries will experience an intensifying crisis of competitiveness. The ways to recover are either to improve competitiveness, by reducing costs, primarily manpower costs, which would be a step back and hardly feasible, or a constant flow of innovations, improved productivity, emergence of new products in advance of inexpensive and increasingly better goods from the new economic giants. The challenge will be particularly sensitive for Russia because during all the years of stagnation, when China started its ascent, and the transformational crisis, when the ascent reached maximum speed, our country was not part of the world competition. And now, every step of the way it is revealing its lag behind not only the developed countries, but also those whom we have seemingly provided technical assistance not so long ago.

Table 4. Effect of export growth of production of Chinese and Indian manufacturing industries by 2020 (% relative to 2005)

Civilizations and countries	Manufactured goods										
	Textiles	Clothes	Leather and shoes	Timber	Minerals	Chemicals	Metal	Auto	Equipment	Electronics	Other
European civilization											
European Union-25 and the Free Trade Association	-5,6 -9,9	-9,7 -16,7	-5,0 -8,5	0,0 +0,8	-0,4 -0,5	-1,8 -3,0	-0,7 -1,3	-0,4 -1,3	-2,4 -5,0	-2,5 -11,7	-3,9 -6,6
USA	-5,4 -10,5	-8,7 -15,3	-4,3 -6,4	-0,2 +0,3	+0,1 +0,2	+0,9 +1,4	-0,7 -1,0	-0,2 -0,4	-2,5 -4,2	-3,5 -11,0	-10,5 -16,7
East Asian civilization											
China	+35,5 +30,0	+20,3 +20,5	+39,4 +45,2	+41,6 +34,7	+36,8 36,3	+42,9 39,2	+38,5 +34,8	+34,8 +40,9	+37,6 +40,2	+35,8 +58,2	+30,5 +33,1
Japan	-1,6 +15,1	-6,0 -8,0	-5,3 -8,1	-1,1 -1,0	-1,0 -0,6	-2,3 -1,4	-2,7 -1,9	-3,9 -6,6	-6,6 -9,0	-4,8 -10,7	-4,2 -6,8
Tailand	-5,1 -9,1	-5,0 -5,5	-6,0 -13,9	+1,5 +6,5	-0,6 +0,3	+2,0 +3,0	+0,5 +2,2	+0,5 +0,3	-1,4 -3,7	+4,6 +6,2	-8,1 -15,5
South Asian civilization											
India	+35,1 +26,2	+23,3 +11,1	+41,4 +45,5	+39,8 +32,1	+30,7 +33,9	+30,6 +33,1	+33,9 +34,0	+30,6 +30,0	+29,2 +41,5	+30,7 +36,5	+23,5 +15,6
Latin America											
Brazil and Argentina	-2,0 -3,4	-1,1 -1,8	-6,6 -8,4	-1,0 -0,9	-1,0 0,0	-2,0 -2,8	-3,2 -4,5	-1,8 -2,5	-4,5 -7,4	-3,1 -8,0	-2,9 -4,0
Mexico	-2,1 -3,9	-2,2 -3,6	-0,8 -1,3	+0,2 +1,2	+0,1 +0,8	+1,6 -2,0	+0,4 -3,2	-1,8 -2,5	-4,5 -7,4	-3,1 -8,0	-2,9 -4,9
Islamic civilization											
Middle East and North Africa	-8,6 -14,8	-18,6 -29,4	-2,6 -3,7	-0,7 -0,7	-0,5 +0,3	-5,8 -5,9	-6,6 -6,5	-3,2 -4,9	-8,3 -12,9	-7,2 -15,9	-9,1 -13,4
Malasia	-7,5 -7,3	-15,8 -27,4	-5,7 -4,2	+0,6 +5,1	-1,3 +0,5	+1,9 +4,4	-1,6 +1,2	-1,1 -2,4	-4,6 -5,9	-0,2 -3,5	-3,6 -5,5
Former USSR	-2,6 -5,8	-4,7 -9,4	-1,4 -4,2	-0,5 +0,8	-1,9 -2,2	+1,0 -1,6	-3,3 -2,9	-0,3 +0,1	-4,4 -7,0	-3,1	-3,2

Source: [Martin, 2006].

Latin American civilization

It would be natural to connect this civilization with Spain and Portugal, the former metropolies closely associated culturally with the countries of Latin America. L. Harrison talks about an IberoCatholic culture.[Harrison,1992]. But in recent years Spain and Portugal have closely integrated into Europe, and their differences from the Latin American countries have grown considerably.

Culturally, Latin America is a multiracial and polycultural society. There are countries with predominantly indian population—Bolivia, partly Peru. Brazil is a model country. It is both the largest and the most promising of all Latin American countries.

Like other countries of the region, Brazil is a Christian, Catholic country with visible religious influence. It is still in industrialization, even though it has made more progress in this area than India or China. Productivity is higher, just as the population's income. But the population is growing rapidly. Furthermore, the gap between the rich and the poor is one of the greatest in the world. G. Ferras [Ferras et al., 2006] notes that Brazil does not make a difference in terms of high GDP growth rates (2% a year in 1990-2004), but it has attracted the attention of the authors of the Goldman Sachs report who included it in the BRIC countries due to its potential opportunities. So far, the potential is underused. Ferras believes that the reasons lie in macroeconomic uncertainty, short-term and reactive nature of the government policy (now it's liberal Cardoso, then it's socialist Lulu). Natural resources are abundant, but production is insufficient. Industrialization aimed at import substitution created difficulties with the capacity to meet international payment obligations in the past with as yet low credibility of Brazilian borrowings, particularly as the public sector is chronically insolvent. Ferras tries to explain all the impediments for the Brazilian economic development by purely economic reasons. And his arguments are almost always convincing.

He writes about an economic system that can either stimulate or restrict the realization of the companies' competitive potential. If markets are not dynamic, more economically viable companies expand by acquiring other, less performing businesses to gain their market share, but without increasing any productive capacities or updating products and fixed assets. Companies operating in stagnating markets have no incentives to change: local innovations are introduced, obsolete equipment is replaced or new technologies are implemented in the most critical areas of production only as needed in order not to allow competitors to approach. Modern technologies needed in capital-intensive industries are blocked out due to the failure to settle loans or absence of favorable prospects for the growth of sales. If a majority of firms in an economy find themselves in a similar situation, the prospects are extremely obscure.

On the contrary, dynamic markets encourage companies to exert ongoing efforts to improve competitiveness. Constantly upgrading production lines, adopting new technologies embodied in capital assets or building new plants leads to market expansion. In such circumstances positive growth prospects are fully justified. But such dynamic markets should prevail. This is where the innovative potential is generated, whose symbol in Brazil is the medium-size jet Embraer. Ferras believes that dynamic markets do not prevail in Brazil.

The explanation of the Brazilian situation is that due to continued uncertainties—considered as a strategic factor—companies are seeking flexibility in three directions: *financial flexibility*, including reduced debt and increased non-operational revenues through financial investment but avoiding operational investment; *market flexibility* that allows increasing sales on local and international markets depending on relative prices; *operational flexibility*, for the companies to be able to adapt operations to demand fluctuations through outsourcing, product rationalization and improvement. In the circumstances of continued uncertainties these adaptation processes benefit those who are, in unfavorable conditions, able to defer to the latest possible moment the time for the replacement of existing capacities and resist investing in fixed assets. Large firms are capable

of following these rules for as long as their size is greater, but even smaller firms are not under pressure. As a result, inter-sector productivity gaps build up for years. These conclusions are given in articles [Ferraz, Kupfer, Serran, 1999; Kupfer, Rocha, 2005]. They are about the long noted phenomenon of coexistence in specific conditions of different settings—modern and traditional. This is characteristic of many developing countries and indicative of market imperfection.

I would not have recited the provisions of Ferras' report in so much detail if they had not described the phenomena so typical of the modern Russian economy. Suffice it to say that according to a survey of more than 1000 enterprises of the manufacturing industry conducted by the Higher School of Economics and the World Bank in the fall of 2005 productivity gaps between sectors did not exceed 3-3.5x and were up to 25x inside the sectors.

Ferras explains this phenomenon by continued uncertainty specific of the Brazilian economy. With respect to Russia I would talk about, first, revolutionary changes leading to a revival of business and the natural risks associated with this period, initial propensity to seek rent and to violate ownership rights. Then, after the crisis of 1998 and up to 2003 the confidence of the business towards positive changes grew. After 2003, with increased government pressure on the business its activity slowed down, but still the growth of investment in fixed assets never fell below 10% a year, even though it could grow up to 20-25%. Second, it should be noted that the deformation of the Soviet economy, lack of market selection mechanisms made it heterogeneous. This a kind of legacy factor.

Consequently, there are certain factors characteristic of the developing markets, countries in transition that have similar manifestations and impede the use of their potential. I believe that, in the long run, it is the specific institutions and culture that lead to market imperfection.

L. Harrison talked about specific features of the IberoCatholic culture still preserved in Latin America. Usually, these are informal rules, but more effective than the formal ones—different rules of conduct depending on whether you are one of ours or an alien, a small confidence radius. Brazil reminds me of Italy as a mirror image across the equator: the south of Brazil—San Paolo, while the state of Rio Grande do Sul densely populated with Italians and Germans reminds me of northern Italy. The key centers of business life are located there. The north of Brazil is the south of Italy: they say work is considered a disgrace to the south of Naples. The conclusions of R. Pantnem's study [Pantnem, 1996] remain valid, however strongly criticized. It should be admitted, though, that Ferras argues that the situation in Brazil is different now: the favelas of San Paolo and Rio de Janeiro are not the geographic, but social north. These are different layers of the same nation that went through socialization differently. We talked earlier of a heterogeneous economy with different settings, enterprises of different efficiency operate side by side even though the worst of them can bring losses to the owners or misery to the employees. Similarly, there must be people with a different perception of values—some behind high fences, others in favelas where the police are afraid to show up. Between them is a wall of mistrust, which impacts the economic development as well. Perhaps, something similar takes place in India and, possibly, less obvious in China. It must be a common feature of the developing countries whose competitive advantage is cheap manpower, the other side of which is a flawed position of the majority of the population and institutions that keep it that way. A peculiar culture of misery: a life style that allows surviving, content with little and seeing benefits in doing nothing.

As long as industrialization continues, which it does at varying pace in all the countries reviewed, as long as a given part of the poor in the traditional economy is involved in the modern sector and has the chance to improve its situation, institutions and culture can develop in as much as the oncoming problems are understood and can be not a limitation for development. As industrialization is over, opportunities are exhausted for the inclusion of those employed in the

traditional sector into the more modern sectors, unless opportunities are discovered for innovative development, a visible slowdown of growth rates and aggravating social problems should be expected.

Islamic civilization

Though each civilization among those which have been reviewed above has a prevailing religion, it is not religion and not only religion alone that defines their cultural foundation. Speaking about Islamic civilization we consider religion to be a determinant attribute. Why? It may be possible to include Islamic countries into other civilizations, for example: Pakistan and Bangladesh to the South Asian civilization and Turkey to the European one. However, we recognize that the artificial nature of this division is well known, and that Islamic countries look alien being included into congenial, but different civilizations. It is clear that in these countries religion actually plays a major role in cultural identification. It may be discussed what caused this situation, however the fact itself should be recognized.

Islamic countries are divided into two categories: oil producers and others. Allah rewarded his faithful, but not everybody: Afghanistan, Pakistan, Bangladesh, Malaysia, as well as Morocco, Syria, Yemen, Egypt, Turkey by and large were deprived of their due share. However, other countries may live at the expense of oil rent. This opens them access to the goods of modern civilization, and there is no need to learn how to produce competitive finished goods, implement innovations, etc. These countries can afford to change nothing in institutions and culture until the well produces oil and there is a good price for it in the world market. Those who are not lucky to be oil producers find other means of existence both in agriculture and development of other natural resources, service sector. All Islamic countries undergo the stage of industrialization, but at a very slow pace. The same is true about the oil producers where all industries, except for oil and service sectors, are poorly developed. It is possible to give examples of the concern about the development of modern industries, for instance in UAE, but the majority of workers and specialists in those industries are foreigners. Only two Islamic countries—Turkey and Malaysia, non-oil producers—have achieved a spectacular progress in industrialization. Turkey became a circular state under the rule of Kemal Ataturque and it understands better than others the advantages of European civilization. The economy of Malaysia has been developing rapidly together with other “Asian tigers,” primarily as a result of Japanese investments and due to the role of the domestic Chinese business circles. In all Islamic countries the traditional sector has a significant share of the market, and the traditional way of life, which has been preserved through ages, is seen everywhere, both in the village and in towns.

Authoritarian regimes are typical for Islamic countries. Only in two or three existing states political regimes may be arbitrarily called democratic. Mahathir Mohammad, the multi-year leader of Malaysia, as well as Li Kuan Yu said about the East Asian civilization that Islam and the European democracy were incompatible. However, his country has successfully completed the industrialization stage. Is authoritarian rule really an inherent attribute of Islamic nations? If that is true, then their backwardness in the area of the innovative economy will become irreversible. It is not enough to borrow innovations, it is necessary to learn how to invent them on your own. Fast growth of the population, relatively low level of social development, even when the national welfare based on oil revenues is high, low innovative capability represent the general characteristics of Islamic civilization and its modern status. The economic backwardness is likely to be caused by inherent institutions and culture of this civilization. However, the devotion to them is rather high, especially when it is significantly impacted by religion. Penetration of European goods and values, their aggressive attack now and then generates a feeling of humiliation and produces a counter reaction which is often also aggressive. At present, the so-called clash of civilizations is confined to a specific confrontation of the adjacent

European and Islamic civilizations. Other civilizations, although have already felt the delights of European imperialism, are not actually in conflict with the European civilization. Based on such attitude, it becomes apparent that the meaning of the clash of civilizations is clearly exaggerated.

However, what does it mean? Even today the European civilization is a leader, but the lack of population growth, the influx of immigrants of other cultures to the countries of the European culture create the appearance of its transition to the stage of decline. It may be true, but it is more likely that European civilization has started a new information, communication and innovation stage of development while other civilizations are still in the transition stage. They come across the necessity to change their traditional institutions and cultures, to borrow more productive components of other cultures. This produces a strain of different strength. Development is unequal, and some countries make progress faster than others or lag behind, are subject to threats, oppose modernization in different ways. This is the time of trouble.

1.3. And what is there in Russia?

The point is that a sharp competition of giants will be developing within the next decades in the world markets. The West with poor demography will defend its position of a technology and innovation leader, which will require constantly generating innovations. It should create waves of technological revolution not less than every 20-30 years. There is no standing still!

The East Asian civilization will first of all advance in production growth increasing its share in the world GDP, but also claiming to play a role of the innovation leader. Represented by Japan, it has proved its ability to compete with the West in this area. However, it is important how the situation in China will be developing. Cultural constraints will be felt even within 15-20 years. The political changes will become high on the agenda. South Asian civilization, India will be also growing fast, and competition will also begin in the world markets both with China and the West. The cultural constraints are likely to be felt stronger all the time and become critical in future. However, the innovative capability is likely to be used earlier in close cooperation with the West and as a competitive advantage against China. The Latin American civilization is likely not to change its position in the markets. Its cultural backwardness will remain: the difference between modern energetic San Paolo with half-drowsy Recife is not likely to disappear. Nevertheless, all three civilizations will use the advantage of cheap labor at least for 20-25 years. It will gradually become more expensive, urbanization will breach the gap with the developed countries. The population growth will finally result in equalization of demographic situations. The difficulties of institutional and cultural changes will hamper these processes: the slower they are, the cheaper is the labor force, the longer it will take to breach the gap between modern and traditional sectors in the countries of civilizations which are catching up. Islamic civilization, judging by its current status, will be at the bottom of the list using, as it is the case now, the revenues generated by natural resource development and expressing emotions addressed to those who are progressing.

And what is the role of Russia in this game of giants? I would like to emphasize it, because until now we have seen ourselves as participants of the show of the so-called Great Powers: Germany, France, Britain, the USA, Japan, whose major advantage was military and industrial power, everything else was not important and could be ignored. At present the situation begins to change. China and India appear on the stage in order to regain their past importance. Oil may substitute industries and culture.

Many Russian national patriots insist that Russia is an independent civilization, different both from the West and the East. It is possible that they are right, because in many ways we do not resemble anybody. However, at present **it is of minor importance, because this country confronts new challenges which should be met.** It is also necessary to decide what civilization

Russia belongs to, or it goes its own way. I believe that given all our distinctions we belong to the European civilization. We represent it on the shores of the Pacific Ocean. The majority of Russians share this point of view. Table 5 shows an assessment of competitive advantages, as well as constraints of Russia and several other countries and civilizations. We can see that Russia's economic growth is constrained by labor resources as in Europe. China, India, Brazil and Islamic countries do not have such a constraint. It means that they can receive capital and employ it for economic growth, however, in such a way as it is allowed by their inherent institutions and culture.

Table 5. Development drivers and competitive advantages of countries and civilizations

Development Drivers	Russia	China	India	Brazil	Europe	Islam
Labor resources	-	+	+	+	-	+
Natural resources	+	-	-	+	-	+
Capital	v	+	+	+	v	v
Institutions	+	v	v	v	+	-
Culture	+	v	v	v	+	-

"+" - competitive advantage
 "-" - constraint
 "v" - no constraint, no advantage


In the area of natural resources Russia has a competitive advantage as Islamic civilization and Brazil. However, they have a labor redundancy. As it is shown today capital is not a constraint for anybody, capital markets are accessible. With such labor force China, India and to some extent Brazil also attract direct foreign investments and employ them to boost economic growth. Europe, the largest capital exporter, comes across the issue of expensive domestic capital investments: labor force is too expensive, there are too many state regulations. Investments should generate a significant growth of productivity and should be supported by innovations. With high demand for modernization investments, Russia has its own large resources and can attract capital from the markets, but is not able to use these resources effectively and convert them into stable growth rates. Why? First of all, given the labor resource constraints, it should be necessary to select the projects that ensure high productivity, as it is the case in Europe. The available capital resources, including those produced by oil and gas exports, cannot be easily employed in the country because of the constraints related to institutions and culture, and the active state involvement in the economy. It results in a relatively low business activity: the business avoids launching large-scale long-term projects.

Russia will not be able to overcome labor constraints within the next decades. It is not able to compete neither with China, nor with India or Brazil in this area. It means that the use of the catching-up development model is not possible for this country. Russia has already completed the stage of industrialization and urbanization. To be true, it has not been a big success, but capital resources are already spent. In this field the situation is the same as in Europe. Only innovative development remains both for Russia and Europe. However, its implementation is connected with the change in institutions and culture, which may increase the business activity up to the maximum level. In this area compared with Europe and the USA we have one advantage, which is also a constraint: our institutions and culture by contrast with the entire economy have the resources of catching-up development, and we may change them. It is not clear whether we can employ this advantage with the energy driven by the seriousness of the challenge. **Russia has found itself as if it were suspended between new global players: Brazil, India and China exerting pressure by means of cheap labor and market seizures, on**

the one hand, and the countries, which are leaders of innovative development, we are clearly lagging behind, on the other hand. The time elapsed when we were dismantling the planned economy. We should make quick decisions and act in an energetic manner.

Neither government authorities, nor the society has an understanding how serious the challenge is. There is still an illusion that we may choose not Europe's road but, for instance, the one of Islamic civilization, making an emphasis on natural resource development and an active role of the state. I would like to remind you that oil and gas revenues may be a significant reserve, capable to prevent surprises, but they cannot ensure long-term development and competitiveness of the country unless they are accompanied either by cheap labor, or an innovative capability depending on institutions and culture. The latter can be improved only with the help of knowledge and skills of the people living in the country, as well as the social organization capable to convert them into the growth of the economy and welfare. However, they may play a negative role if unrestricted expenditures trigger inflation.

Therefore, we, first, **are doomed to implement the innovative development** and are short of time to do it by contrast with China, India or Brazil. This is a reply to the question why do we need modernization. Second, it **can be implemented only through social and political reforms, changing institutions and then culture** in such a way as to ensure the innovative capability growth. This is also a response to the question of what modernization we need. Third, **the state authorities and the elite must prepare the society** for the required changes, create a positive perception of these changes and not obstacles for them in the interest of one or another group of individuals. If such obstacles are created, it means that we failed to meet the challenge.



2. Conditions for Innovative Development and the Necessary Institutional Changes

The point is that the path of catching-up development is essentially closed. To be more precise, technological borrowings are possible and necessary, but they will produce benefits only in the short term. For this country the innovative development model does not have alternatives.

It should be acknowledged that this idea might have been understood by the ruling elite, though not very clearly. Anyway, back in 2001 V. Putin pointed out that it was necessary to ensure the transition from a raw material economy to an innovative one. He also supported the idea of the national innovation system, which had been developing for a long time by A. Fursenco. This starting point triggered ideas of reforming scientific organizations, including the Academy of Sciences, as well as setting up different innovation funds and other institutions. In particular, in 2002 the Fund for Development of Small Scientific and Engineering Enterprises (to make it easier to pronounce it is called Bortnick's Fund, named after its director) launched START, the innovation project program, which copied the main ideas of the American program SBIR, which was started back in 1960s and was an undisputable success. The number of initiatives in this area is multiplying, and the first technical parks, innovation and engineering special economic zones, etc. (Expert 2007, No 1—2, 2007, No. 1-2, p. 57) have been launched. However, to be true, we have not made any serious progress in the area of innovations. The major reason is that no realistic conditions have been created in the country for a large-scale development of the innovative economy. It will be described below.

Let us imagine what conditions are required for the transition to the innovative economy and what institutional changes are necessary for their creation. There is a certain general prerequisite of reaching the minimum welfare standard. Let us assume that it is represented by the GDP per capita equal to \$5,000 per year. We have already reached this standard, if estimated on the basis of purchasing power parity.

I have already counted another seven conditions:

- 1) Freedom creativity;
- 2) Free enterprise;
- 3) Competition;
- 4) High level of education;
- 5) Science;
- 6) Innovative industry;
- 7) Social capital, credibility.

It means that such conditions should be at a competitive level, i.e. at the same and above that in the countries with an existing innovative economy. Now let us consider the content of these conditions and those institutional changes that are required for their creation in this country.

Freedom of creativity

Freedom of creativity is a key condition of innovative economy. Search for nonstandard solutions in different areas is the essence of creativity. Freedom of creativity is required in order to expand the framework of search for everybody, remove limitations, which are the barriers for finding the best solutions.

Each human being lives in a world of restrictions, both formal and informal, which make smaller the freedom of his choice, but at the same time simplify life, allow making many things automatically without using one's mind or making decisions. If there are too many restrictions, the space of freedom is too small, opportunities for creativity are reduced. Therefore, the universe of discoveries and innovations is reduced.

It should be underlined that not an abstract freedom is important, but an optimum balance between freedom of creativity and restrictions. Each human being is eventually looking for his own balance. However the society imposes its own restrictions and it also participates in this search. The innovative economy expects that the balance to shift in favor of freedom, the restrictions, at least external, in relation to a personality should be reduced.

The society is designed in such a way that people have different abilities and the majority of them expect that their life is clearly regulated in order to think as little as possible. As a rule, they do not value freedom very much until it becomes vital. However, each human being creates his own picture of the world where he tries to find his place in order to justify his way of life, respect himself and his dignity. And in this picture the human occupation, its alignment with his personal abilities and inclinations is very important. This is satisfaction with one's own labor and the share of creativity, which it contains. It is clear that occupation should generate means of existence, both for an individual and his family, according to socially accepted standards.

However, there is a small percentage of people, who make up a minority, who explicitly or implicitly have more abilities and talents in one area or another. They need more freedom for creativity and seek to get rid of redundant regulations and restrictions. The question is whether these restrictions and regulations are likely to be established at a maximum level to meet the needs of those who do not expect much, or at a minimum level to meet the needs of the others, who are seeking freedom in their creative activity. It is quite clear that minimum regulations are suitable for the innovative economy in order to use the creative abilities of people as much as possible.

Inventiveness is often called by a foreign word "creative". In his book *Creative Class. The People Who Change The Future* Richard Florida pointed out that the name for the new stage of the economic development: "informational" or "economy of knowledge" was not accurate. The modern economy is driven by the human creativity. Creativity has become the major source of competitive advantage [Florida, 2005, p.18]. The innovative economy alternatively can be called creative economy.

Florida quotes a statement by Paul Romer, a professor from the Stanford University: "A spectacular growth of living standards, notwithstanding the increase in competitiveness in the market, always depends on the good recipes and not on the size of the meal portions (Ibid., p. 5).

You should understand that quantity is not as important as novelty. Creativity was always present in the human activity. In the new time the industrial revolution was produced by a sharply increased flow of innovations.

It is true that in the history of capitalism it was followed by the organizational epoch, when the concentration of production and the monopoly growth as a result of series organizational innovations, which enabled to create the mass production of standard finished goods and implement the economy of scale, began to suppress creativity and organizational innovations. However, now that this period has ended, it became necessary to maintain a new form of balance between organization and freedom of creativity.

Today we observe how a new feature is coming to the scene: if in the past innovations primarily were embodied in the design of goods, their manufacturing technology, and now their manufacturing is transformed into independent types of activity, new creative industries are launched. Below is data on the share of the world market owned by these industries in 1999, which by the way characterize the creative and innovative nature of the economy of the USA. (See table 6).

Table 6. Major industries of creative economy in the world and the USA

Industry	World Economy, \$ billion	USA, \$ billion	Share of USA, %
R&D	545	243	44.6
Publishing business	506	137	27.1
Software	489	325	66.5
TV and radio	195	82	42.1
Design	140	50	35.7
Music	70	25	35.7
Cinema	57	17	29.8
Toys and games	55	21	38.2
Advertising	45	20	44.4
Architecture	40	17	42.5
Performing arts	40	7	17.5
Crafts	20	2	10.0
Video games	17	5	29.4
Fashion	12	5	41.7
Arts	9	4	44.4
Total	2240	960	42.8

Source: [Florida, 2005, p. 62]

I believe that the statistics on creative activities are not very accurate; therefore, we should consider this data carefully. However, its appearance is noteworthy. Florida also suggested a new class structure and assessed its components and dynamics. He suggests singling out a creative class, including its super creative nucleus, as well as a supporting class. The working class and agriculture remained from the previous division.

Table 7. Class structure of the USA, % of employed population

Classes	Years			
	1900	1950	1980	1999
Creative	10.0	16.6	18.7	30.1
Including super creative nucleus	2.4	4.4	8.2	11.7
Support	16.7	30.5	46.2	43.4
Working	35.8	41.1	31.7	26.1
Agriculture	37.5	7.0	2.8	0.4

Source: [Florida, 2005, p. 59]

Without going deep into the details of the methodology, we should note a quality shift at the end of the 20th century, including the fast growth of the creative class and the reduction of the share of farmers and workers.

Innovation is always eventually preceded by discovery. Discovery is a very individual act of the personality, the human being who felt some kind of flash of genius, big or small. This was likely to be called "Holy revelation" a long ago. The life of a person who had such an experience becomes meaningful and he expects more and more repetitions. The more innovations and discoveries we have, the happier the people are.

I allowed myself to express these philosophic ideas, because freedom of creativity is a relatively general condition, which seems to be easily implemented: who precludes a person to be creative if he wants to do it? In fact, there are many obstacles, the creative potential of the people is not used effectively. Many of the above-mentioned conditions such as freedom of enterprise, competition, science, education are the institutions whose status and capabilities impact the usage of creative potential and first of all freedom of creativity.

Freedom of enterprise

Freedom of enterprise is primarily a component of freedom of creativity. Entrepreneurial spirit is always a search for nonstandard solutions, though business includes its own routine. However, entrepreneurship is a special creativity, not associated with learning, making a discovery, but with making profits. It is always self-interested, this is its nature, which produces benefits for the society, and it is also the danger which requires implementation of regulations, both legal and ethical, to restrain the business. The balance of limitations and freedom depending on changing circumstances plays a vital role. The innovative economy is likely to require shifting the balance in favor of more freedom.

Second, an entrepreneur is a natural and major consumer of innovations. If he does not exist, there is no address where to forward the products of inventions. The more freedom of enterprise, the more eventual demand for innovations and intellectual products employed for their creation. Today we come across an issue: the entrepreneur does not want to spend money on innovations, research and development. The business in this country in particular spends significantly less money for these needs than our competitors, including China and Brazil. This is caused by quite clear and, in principle, eliminable reasons. First, entrepreneurship in Russia is very young, and it is still inclined to seek rent income, and there are still opportunities for that. However, sooner or later this period will end, maturity and competition will force the business to think about long-term prospects and spend more money on innovations. Third, it should be noted that until today not all opportunities for technological borrowings, which first of all should be reasonably applied, have been implemented. Fourth reason: entrepreneurship should be free within the law. If entrepreneurship rejects long-term or risky projects, if it can or must pay bribes to government officials or spend their money under the orders of the people not associated with the business, “to be as good as gold”, said a high-ranking official of the administration of the Russian president, it means that it is not free. Entrepreneurship is not free to such an extent that it has to apply innovations. The business should be under pressure, but primarily exerted by the market and not by the government officials.

At this point we may specifically mention the institutions, which guarantee freedom of enterprise. They are well known: supremacy of law, independent and competent judiciary, which may be trusted, capable of ruling against the state authorities if its representatives violate the law. It also includes low administrative barriers, free access to the market, protection of the business from corruption and criminal pressure. The key issue is to protect ownership rights, including intellectual rights, to ensure contractual performance.

These are commonplace truths, but if they are overlooked, if these institutions do not work as intended, the business activity will be low or oriented in the wrong way. The demand for innovations will be lower.

Competition

Competition is an absolutely necessary addition to freedom of enterprise. It creates incentives in order to implement innovations for updating products, increasing productivity and reducing

costs. It enables receiving monopolistic earnings for a certain period of time until it increases the attractiveness of the market and attracts competitors. Those who will prepare innovations by that time, have a good opportunity to improve their position. Others who do not pay attention to innovations, not only do not have the opportunity to receive monopolistic earnings, but have to take the dust and be under the threat of bankruptcy. It is evident that the situation is different in various industries, but the industries themselves may lag behind, lose opportunities to attract capital from the financial markets and reduce their share in the national GDP.

Therefore, competition makes the entire economy healthy first of all by facilitating innovations. The equality of competition terms is so principally important to prevent creation of competitive advantages in other ways than implementation of the most effective innovations, to ensure the selection based on economic criteria and not driven by personal relationships or benefits.

For this purpose competition should not be perfect from an academic point of view, it is enough if it creates necessary incentives and is more effective than bureaucracy, which is not very difficult. However, it is evident that today competition should be strengthened in order to restrain the concentration and monopolistic trends natural for the market economy within reasonable limits.

I would like to recall that at the end of the 19th century the USA passed the Sherman Anti-Trust Act. President Theodore Roosevelt (Republican) had to be involved for more than five years in litigation against Standard Oil, a monopoly giant, in order to divide it and therefore to create a competitive business environment in the oil market. This was also done by Franklin Roosevelt (Democrat) during the period of the New Course. Our president V. Putin reminded about that in his message to the Federal Assembly, however, it was mentioned in the context of the struggle against oligarchs that Mr. Putin as F. Roosevelt was engaged in, and it somehow justified the pressure measures against the business that were used in Russia in 2000-2004, and are still high on the agenda. However, F. Roosevelt acted in another way: in 1935, he initiated in the USA the passage of the legislation package against large multi-industry holding companies, which substantially changed the entire picture of corporate governance in the country and facilitated the strengthening of competition. In this country such holding companies, including state-owned, exist in all industries, however, by contrast with American companies they “are as good as gold”, but only in their relationships with the state authorities. Nobody reminds them about the benefits of competition anyway.

In 2006 the new Law on Protection of Competition, which makes a significant contribution in the improvement of legal regulation of these phenomena, was passed. It should be noted that the market share that enables to recognize a company's position in the market as dominating has reduced from 65 to 50%. In the event amendments are made to the Code of Administrative Offences, the misapplication of the dominating position in the market may be punished by large penalties imposed on revenues, including cases of collective domination if relevant proof is found. At the same time the amount of transactions requiring the approval by the antimonopoly authority was increased from RUB20 million to RUB 3 billion, the same threshold is applied in the USA. This is important because until now the Federal Antimonopoly Service (“FAS”) and its predecessors have been dealing with small violations, while big violations most often made by monopolies and companies having relationships with high state authorities remained out of the scope of their competence. At present, the number of cases initiated by FAS should be reduced 18 times, and its capability to protect competition will be only strengthened if the law certainly becomes mandatory for everybody. However, this gives rise to doubts. The expansion of the current application of the special exporter status, which has been recently granted to *Gazprom* and *Rosoboronexport*, reduces the competition field, and the rulings of courts that FAS actions should be based on, may be biased, according to our knowledge.

Despite the arguments used by the libertarians against the antimonopoly legislation, it is likely to be indispensable, especially if the antimonopoly authorities are independent and possess a broad sphere of competence in order to struggle against the lobbyism of large companies. In this connection supremacy of law and independent judiciary are absolutely irreplaceable components of the institutional system of innovative economy.

But that is not enough. Many countries have already recognized that the traditional antitrust policy consisting of the passage of legislation and its further strict enforcement is already insufficient. The survey [Golikova and Associates, 2003] has shown that a number of counter-competition actions are growing in the Russian markets: the share of respondents whose rights were violated amounted to 7% in companies with staff numbers of up to 100 people, 11% at the companies with 100 to 500 staff, 19% in companies with about 500 people. Only large companies took such suits to the court, and the regional and local government authorities were the major offenders of antitrust laws. This survey, which dates back to 2002-2003, describes a major problem of this country: legal noncompliance, lack of sufficiently strict enforcement techniques. However, the situation could be improved if public organizations, societies of entrepreneurs and consumers were engaged in a wide promotion of healthy competition and the struggle against those who oppose it. Even a special term “competition advocating” was invented [Avdasheva, Shastitco, 2006].

Open economy, maximum reduction of restrictions also facilitates competition.

Education²

A high level of education is necessary for freedom of creativity and the innovative economy in general. Discoveries, which lead to innovations, usually require possession of the most advanced knowledge in one core area and adjacent ones. Without it “wooden bicycles” are invented. Therefore, the country needs as many people as possible with the most advanced knowledge, as well as the skills to update them all the time. Therefore, the requirements for education are high.

It should resolve two contradictory issues: first, ensure a broad educational background and acquisition of professional qualifications, including mastering a specific number of competencies and skills by all citizens of the country in order to make them competitive in the labor market. Second, identify, select and prepare the most able, gifted, talented people based on specific skills for different areas of activity out of a maximum number of candidates. The less talented people are identified and promoted, the smaller will be the number of discoveries and innovations, because the conditions for creative research should be provided for these people first of all. They will make their choice themselves, but the society in its own interest must create the best conditions for doing it. Equal conditions should be ensured for young people regardless of the status and creditworthiness of their parents.

Such requirements for the educational system have been made a long ago, but for the innovative economy they have become especially significant. The Soviet educational system had many advantages and first of all it was its democratic nature. However, it does not meet the modern requirements, and while the reforms were made in other areas and the country survived through the transformation crisis its backwardness has increased.

Therefore, the educational reform and large investments into its development are needed. The reform concept has been identified a few years ago, and in general it looks constructive. I would like to remind about its basic components: (1) STE is a single state examination; (2) SPFO is a state personal financial obligation (educational voucher); (3) Openness of education, a

² I thank B. Roudnik for assistance in preparation of this section of the report.

participation of the country in the so called Bologna Process; (4) Development of creative abilities of students.

Until now STE has been an object of serious debates, however, this component of the reform is likely to be implemented soon. My understanding is that its objective to create a single system of assessment of knowledge received in secondary school, which excludes difference in requirements depending on educational institutions and their location. Otherwise, such important role of STE as the provision of wide access to quality education will not be implemented. In my opinion, the STE results should become “the pass” for additional tests conducted by a higher education institution.

SPFO is the implementation of the principle of per-capita financing of higher education by the state (“money follows the student”). This also provides accessibility of education. SPFO is granted to those, who have successfully passed the STE. They bring an appropriate amount of money to the chosen higher educational institution. I believe that it should vary in size depending on the results of the STE and other tests. SPFO encourages competition between the higher educational institutions for the best applicants.

Unfortunately, by contrast with STE the idea of SPFO is not likely to be implemented soon. In practice, the idea has been given up by rejecting the differentiation of the standard size of financing for higher educational institutions depending on the scores received by the applicants passing STE. The idea of per-capita financing is not even implemented in its simplest form. However, STE without SPFO significantly loses its value. The single system of knowledge assessment is not eventually important in order to be enrolled into the higher educational institution without the tests: in such format it really seems disputable, it is needed to implement the right of citizens to free education or, at least, to access state support in receiving higher professional education. Together with SPFO, the STE enables to combine free education in order to support the talented people (and educational loans along with it) with paid education for the less successful if they have the intention and opportunity to study, as well as accessibility of education through encouragement of competition between higher educational institutions in order to improve the quality of education. In the meantime, the transition to the financing of education on the basis of SPFO remains only an assumption.

Openness of education, participation in the Bologna Process are also criticized. However, I believe that it is very important that the Russian youth receive education at the level of world standards, and our education will be integrated with other educational systems of the developed countries to make it possible for our diplomas to be valid in many countries, in different labor markets. Such approach creates specific risks, including probability of brain drain. But the best method to retain and to invite talents is not to create restrictions, but to develop a favorable business, scientific, educational environment and the conditions of freedom of creativity, and then this country will observe a brain inflow.

We are talking about higher professional education which is the final product of the educational process. However, the quality of this product primarily depends on the primary and secondary school, whose status is generally poor across the country. In this field, investments are a major issue. Investments should be made into the teachers in order to make the school attractive for talented people, capable to combine the roles of teaching and upbringing.

The latter means not simply explaining it to the pupils what the specific behavioral standards are, but reminding them, at least those who show intention, interest in creative activities, a target search, an identification of inclinations and talents. The school should prepare its graduates both for the freedom of creativity and the skill of realizing the concepts in practice. This requires a change in the content of educational programs and guidelines.

Development of creative abilities of the students applies to all levels of education, and is very important for the implementation of an innovative development model of the country. Our education in the former Soviet Union was primarily designed to make the students learn relatively low-standard, i.e. mass standard knowledge, which met the requirements of industrialization and urbanization, and to provide specialized professional training. There was also the elite higher education, which helped to supply staff for scientific schools and design bureaus. However, the field for picking up talents was very small. The attempts made in the late 50s of the previous century by academician M. Lavrentyev in order to combine academic science with education in the Siberian Academic Town were not rolled out. And now, if we want to ensure competitiveness in the innovative economy, the important task of education is to identify creative abilities of people, encourage them to work in a creative manner and to be ready to give up academic truths. In order to meet these needs, the number of hours for an independent work of the students should be increased and the lecture hours, when the teachers make presentations, should be reduced. The emphasis in their work should be made on the individual teaching (academic advising for students, tutorship), the non-personified knowledge check, the participation of students in scientific research and discussions. In essence, the point is about an internal educational reform, which is much more difficult to make than the change of the general system of knowledge check and the financing.

I do not have the intention to discuss the educational reform in detail at this point and do not consider myself competent enough to do that. However, I would like to underline the significance of implementation of the major principles of the educational reform in order to build an innovative economy and to modernize the country

Science³

Just like education, science is a foundation stone of the innovative economy. Science produces new knowledge; education disseminates it and also systematizes it for the ease of apprehension. Today, a good textbook is, first and foremost, a collection of latest achievements in a discipline streamlined in a logical and integral design. Therefore, science essentially supplies knowledge that forms the content of education, and education, in its turn, trains personnel for scientific research institutions.

Before the revolution Russia had rather strong traditions in science, mostly in the universities. Science had been developing in close cooperation with European schools of scientific research. In the Soviet era, after suffering from serious losses in the first post-revolutionary years and in the period of purges, science was largely supported by the state, mostly in the areas of military and strategic importance — mobilizing and militaristic nature of the government system made these areas a top priority. Achievements of the Soviet scientists in mathematic, physics, chemistry, geology gained worldwide recognition. They were also translated in the production of nuclear weapons, generation of nuclear energy, construction of space rocket systems, creation of up-to-date aviation technology etc. There were times when these sectors were at the forefront of science and technology. However, science in the USSR was placed under an extremely tough ideological pressure due to which genetics, cybernetics and especially social and human science lagged behind. In some way or another, the country was in possession of an efficient science sector, as well as of clear evidence of the fact that Soviet science, education and innovation were on the competitive edge in the world. Scientists were people of high reputation.

Science in the USSR was organized in some original manner: a majority of the most influential scientific institutions were centered around the Academy of Sciences, an organization

³ I would like to express my gratitude to L.M. Gokhberg and B.G. Saltykov for their assistance in the drafting of this section of my report.

established by Peter the Great. But only under the Soviet rule (in the 19₀₀s) the Academy of Sciences was turned into some sort of an agency for fundamental sciences, functionally similar to other ministries and government agencies. However, by its external features (e.g. its President was elected by Academy members and not appointed by some superior authority) it was a relatively independent and self-governed organization.

The Academy had close links with the research centers of defense agencies. Such links were usually based on «personal unions»: many prominent experts (designers, engineers) of these centers were elected as academicians, and the financing of these centers was many times greater than the appropriations for the institutions which did not have such links. At the same time ministries and government agencies in all spheres supported their own scientific research institutes (civil sector science), some of them were very important. The number of researchers was very large compared to international standards, although their productivity was far from perfect. Some sectoral institutions worked mostly instead of government officials thus keeping numbers of the managing staff at the ministries at a rather low level. University science was generally rather weak, with the exception of two or three dozens of humanitarian and technical universities and other higher educational institutions. It is interesting to note that the USSR Academy of Sciences established its local departments and centers in order to promote science in the provinces, but nobody ever bothered to promote science in the provincial universities. The spirit for this was simply not there. I must note that any entrepreneurial activity was banned, just as foreign travel. In those days only the science sector enjoyed relative freedom. This is why careers in science had been attracting many young people for whom other opportunities opened at a later stage. Such organization of science could exist only in the environment created by the planning-and-distribution system, but changes in the sphere of science became inevitable after its collapse.

At the early stages of the reforms science suffered heavy losses caused by sharp cuts in the government financing and practical «nullification» of orders from the industry. Inflow of young people into scientific institutions came down to a halt while brain drain increased sharply. Many of those who had been planning scientific careers joined those business areas that were offering chances of gaining competitive edge at the international level. The financial situation of scientists became humiliating. Sharply negative attitudes prevail among them even now. Any reforms or transformations stumble across hostility, not because of the current situation looking good to anyone. People are simply afraid of an even greater decline in the Russian science.

Still, reforms are needed, first of all, not only to restore the former role of science, but also to raise it to the level enabling it to meet the requirements of the innovative economy.

One cannot say that nothing has been done over the last 15 years. As long ago as in 1992 B.G. Saltykov, Minister of Science in the Government of Y. Gaidar, proposed and almost implemented a plan of emergency measures aimed at the salvation of the most important components of the Russian science that was to be accompanied by a reorganization of its management and financing mechanisms. Of course, it was, first of all, a matter of salvation in the conditions of the sharpest financial and largely transformational crisis. The plan had powerful opponents: up to now Saltykov's name is not mentioned in the Russian Academy of Sciences as though it is the name of devil incarnate. . the reason for this is the fact that he impinged upon the Academy's conservative albeit gainful principles. Saltykov proposed to have the finances distributed via the academy that managed its subordinated research institutes and to complement the financing of research groups with funds coming from independent foundations as was done in many countries with developed science. Academicians who had magical influence on the country's top leaders and the government ministers resisted the reform of the Academy. The reform was stopped after Saltykov's resignation in 1996.

I am very pleased by the fact that after 15 years his name was recalled at last by those who were able to make an unbiased assessment of the situation [Imamutdinov et al, 2007, page 55]. Four public

funds were established at that time in order to finance science and innovations. They all exist today: Russian Fund for Humanitarian Studies, Russian Fund for Fundamental Research (natural sciences), Russian Humanitarian Science Fund, Bortnik Fund (this is how we call the Fund for the Assistance to Development of Small Enterprises in the Sphere of Science and Technology which has been headed by I.M. Bortnik since the day of its foundation), Russian Technology Fund. They manifested their efficiency over all these years. Sectoral scientific research institutes were privatized at that day, technology parks and innovative technology centers (ITCs) emerged, among them the ITC of Svetlana Scientific Development and Production Center in St. Petersburg founded by A.A. Fursenko (who is now the Minister), science park of the Moscow State University and many more. Over 60 state-run research centers (SRCs) were established in order to “salvage” the most promising areas of science, although rather limited financial resources were to be concentrated in them. These were mostly large-scale sectoral institutes with the most prominent schools of engineering and technical thought. A few (seven or eight) academic centers that had become SRC members were later forced to withdraw from this membership by the Academy of Sciences which refused from any further participation in Saltykov’s program in the heat of the struggle between government agencies.

In 1993 it seemed that the changes were hurled back, although the status of science did not ameliorate. Only ten years later, when Fursenko, the initiator of the technology park at Svetlana, strengthened his influence in the government, it became clear that the reform could not be avoided. Let me cite here an article of Ze Dong Kwan, Doctor of Physics and Mathematics, from Novosibirsk, one of the few academic dissidents [*Nezavisimaya Gazeta*, 2003, May 28]: «The system of the USSR Academy of Sciences created by the totalitarian state had the objective of creating remarkable collectives of scientists, first of all to carry out the formidable tasks of the construction of «great pyramids» that should have immortalized the «great» era. In this system everything appeared to be turned upside down: the main educational function of science was pushed aside, and the system’s cherished aspiration was to see a smile of knowledge...on the happy face of a fool». In my view, this sounds rather sharp, but the author of this article is obviously sick and tired of the changes. His positive approach lies in the «return to the initial and internationally accepted situation when the analytical and the educative roles of science are in the lead ». Let me remind you that in the Soviet era Professor Kitaygorodsky who demanded a return of the fundamental science to universities was considered a dissident.

In summer 2005 A.A. Fursenko, Minister for Education and Science, presented a concept for the reform of state-governed sector of science at a meeting of the Russian Government. The following was stipulated in this concept. First, a reduction in the number of state-run scientific institutions by the year 2010 (there were 2,760 of them at that time, including those working under the auspices of the Russian Academy of Sciences and sectoral academies), transformation of some of them into joint stock companies with subsequent sale of their share portfolios held by the state, transformation of others into autonomous non-profit state organizations not financed directly by the state but receiving orders from the latter. Apropos, same transformation plans also apply to most of the universities. Second, increase of the scientists’ average monthly wage in 2008 to 30 thous. rubles, i. e. three-fold (*Kommersant*, 2005, July 1). But no decision was not taken at that time. A year passed since then. In 2006 some new ideas were officially announced, including an idea of turning the Russian Academy of Sciences into a club of prominent scientists and transferring a substantial number of the Academy’s administrative roles to a government agency, as well as an idea of the appointment of the President of the Academy by the President of Russia, just as he appoints the regional governors. The latter idea is the only one that has been implemented (relevant amendments were made in the Law on Science).

Meanwhile the situation in the Russian science is deteriorating rapidly. According to the statistics [*Science Indicators*, 2007], in 2005 there were 813 thous. persons engaged in scientific research and development (among them 104 thousand persons were in the Russian Academy of

Sciences). In 1992 there were 1.5 million (128.5 thous. in were in the Russian Academy of Sciences). Russia is behind the US and China in the number of people engaged in R&D, and also behind Japan in the number of researchers. Against this background the situation with the financing of science and its productivity looks deplorable to say the least. Russia ranks 30th by the share of R&D spending in GDP (1.07% in 2005). Expenditures on science per one person engaged in this sphere in Russia amount to approximately 19 thous. US Dollars per year (in terms of purchasing power parity) as compared to 100 thous. US Dollars in China, 131 — in Germany and 147 thous. US Dollars — in Korea. Russia ranks 11th by the number of articles in the world's leading scientific magazines (in 1995 it ranked 7th), and 19th by the volumes of quoting from scientific papers or articles.

I am not speaking here of the indicators of innovative activities. For now let us think that science and innovations pertain to different spheres, the latter not always being closely linked to the results of scientific activities. Anyway the lag keeps on growing and time is always lost just when one realizes the need to rush after it.

I have no intention to dwell upon all details of the science reform, but I will name its most important aspects:

- 1) junction of science and education, establishment of the so-called “research universities”;
- 2) concentration of resources on top-priority areas of fundamental science and, apart from providing conditions for individual creative work, implementation of a number of major projects, or meta-projects according to Fursenko's terminology;
- 3) maximum transparency and integration of the Russian science into the world's scientific community, as well as international scientific expertise;
- 4) top-priority and widespread development of the innovative industry, commercialization of science.

All this is well known. Endless discussions of all these issues continue without any perceptible progress.

Let us take the *junction of science and education*. E.V. Vodopianova [Institute of Europe, 2006, pp. 43–44] writes: «The workload of lecturers in Russian higher educational institution is so heavy that they have no time to do any scientific research. Theoretically, research work and teaching are two different professions. Western experience attests to this assertion. Their university professors seldom see their students as they spend most of their time in research. Our university professors patronize students from first bell to thesis defense.». Therefore, her conclusion is: «a scientific university in Russia is the invention of a new way of keeping Russian scientists off their work ...».

Further on Vodopianova writes about the aging of the science's human resources: In 1988 people who were 30—39 year old were the most numerous age group among scientists while in the late 1990s a majority of the scientists were 50—59 years old [Institute of Europe, 2006, p. 45]. And this is true: as of now, the average age of researchers in the Russian science is 48, doctors of science — 61 year, candidates of science — 53 years. Almost one quarter of all scientists are older than 60. More than half of all doctors of science and one third of all candidates of science are in this age group [Science Indicators, 2006]. 57% of university professors are in retirement age [Education in the Russian Federation, 2005].

So, how can we address this issue? Forbid young scientists to leave the country to work abroad or go into business? Raise their salaries to 30 thous. rubles and expect this measure to stop them from quitting their jobs? It is clear that such methods won't work.

We may add that the current situation in the university science, particularly in its financing and infrastructure are not in any conformity with the role and the importance of the higher educational institutions in the development of Russia's scientific potential and its educational system. Suffice it to say that the share of higher educational institutions in the total R&D costs has been at the level of 4—5% for more than ten years, although, for example, the total number of doctors and candidates of science in the teaching staff, in absolute figures, is 1.5-2 times as big as the total number of doctors and candidates of science in the Russian science as a whole.

Let us come back to the Western experience where, according to Vodopianova, university professors are engaged in research and do not pay any attention to their students. This is not exactly so. Moreover, quite often this is not so at all. True, they spend less time on lectures and seminars, but each one is assisted by a group of young students who carry out specific assignments in the context of the projects of their research instructor. They also do their work pertaining to his projects under his guidance or the guidance of his assistants. Science is being reinforced by young people on an on-going basis. Not all students embark on scientific careers, but those who have demonstrated their abilities, who are willing to work in science, who see their career opportunities in science will stay and their professor will find ways to motivate the most talented ones. Such practice exists not only in the West, but in our country as well. Therefore, the idea of a research university that unites the cognitive and the educative roles of science is not the death of science but its salvation, and a way to settle the most acute problem of the aging of human resources in science. An academic institution will not be able to tackle it. Of course, not all geniuses in science are desirous to fiddle around their students, but they must have assistants. It should be remembered that the qualities of a research team organizer have always been highly appreciated in science.

Concentration of resources. This issue is not in the cutting of expenses. On the contrary, expenses on science, including the fundamental science, must be increased. I would suggest spending large amounts of money on the equipment of the best Russian scientific centers with up-to-date research equipment so as to make them lucrative for researchers and invite leading foreign scientists to work in these centers, just like Peter the Great invited Leonard Euler to Russia.

It is quite clear that a great number of such centers would be irrelevant. One would have to choose. If someone was borne in a small country, say, Belgium or Czech Republic, and if he intends to work in the most prospective areas of science, he must go to another country where conditions for such work are in place. Scientists in some spheres will still be leaving our country, like Mechnikov once left Russia to work with Pasteur, but after such centers will be established here people will be coming to us as well. This is something to strive for. I would like to remind you of the fact that in a number of countries with developed (and productive science) science has elaborated and successfully implemented a new and rather efficient model of «excellence centers» where world-class research is made in various spheres with the prospects of large-scale innovations in the economy and the social sphere. Specific organizations or consortia may act as such centers. They may also be established within the framework of network projects. High level and feasible results of research activity are the most important factors (including internal factors that are of importance to the science itself). Creation of such centers and concentration of resources on their support is a key element of the reform of the state-run sector of science.

Maximum transparency. No one should be stopped. I would send 10 thousand Russian students and postgraduates to study in the world's best universities, apart from those who are already studying there. China sends thousands of students to the US, but only 15% of them come back right after graduation. Still, experts believe that education and work abroad will pay off for the country anyway. In fact, Big Science has no borders. The question is in the direction in which the borders will be crossed after 15—20 years. New Kapitzas who would invite future Rutherfords must appear in our country. Moreover, it would be advisable to put forward an

initiative of establishing new international scientific centers, including those in Russia, to be financed from international foundations or member states.

Openness and transparency in science is a major pre-requisite for its efficient development and the public recognition of its role and importance. Without all this one cannot expect any significant interest in science on the part of its main customers, i.e. the state and the business community. Therefore, it is vitally important to set up a system for regular assessment of research activities of scientific institutions and universities on the basis of internationally accepted criteria and procedures, invitation of independent experts, including foreign ones, and the open publication of research findings. Decisions on the support to specific organizations and areas of science must be taken on the same basis, and, when so required, decisions on their restructuring or liquidation. These are the principles on which science exists and develops in the world's leading countries. Only those who have nothing to show as results of their scientific works or those who intend to conceal their inefficiency can hinder the formulation of the transparent rules of the game.

Independent scientific expertise, which is free from any bureaucratic interests is one of the most important roles that science and scientists play in all developed countries, and in our country as well, especially in view of the growing importance of the expert community. An expert is someone who possesses a very high level of knowledge in a certain sphere, i.e. a scientist in most cases.

Unbiased and qualified opinion is important everywhere: in the assessment of scientific achievements, in the definition of the lines for scientific development, in the scientific and technological forecasting, in the humanitarian sphere. There must be someone to make totally unbiased judgments. This is the role for the scientific expertise. Unfortunately, we have lost this tradition which had always been inherent to the ethics of science. Scientists are too dependent on financial or bureaucratic interests, the interests of their country or the interests of the company they work for. Moreover, a lust for some great discovery sometimes goes ahead of real achievements.

This could be the tone for the discussion at the Academy of Sciences, the reform of which is to play an important role in the destiny of the Russian science. If the Academy intends to manage the country's resources, the appointment of its president as a government official is quite natural. If it prefers the role of a civil institution or a center for scientific and technical expertise, it would be better for it to exist in a more independent environment. The roles of London's Royal Society, the US National Academy of Sciences or even Institut Français which is fully financed by the state but does not practically manage scientific organizations are more in line with the roles of independent expertise.

Industry of innovations

The generally known failure of the Russian science to meet practical requirements and its inability to translate discoveries into commercial products are among the main reasons for its crisis and a significant factor of the retardation of the Russian economy.

E.V. Vodopianova writes: «Post-industrial society's greatest challenge to science is a situation when the «spirit of knowledge» is fully replaced by the «spirit of enterprise». Students are driven by profitable and not genuine knowledge.» [Institute of Europe, 2006, p. 42]. Quoting the words of S. Simaranov, top manager in a US consulting company, she writes that talented scientists are attracted by scientific work for good salaries but they do not care about innovations. Simaranov is of the opinion that industry implements innovations out of despair when there are no other ways to raise the level of competitiveness [Ibid, p. 43].

And yes, all this is true, especially the last argument. This is what competition is about! But this is only one side of the real life's antilogy. Another one is that the country must move to the innovative economy. Russia must catch up with and get ahead of the other countries in this very sphere if it is to meet the challenges of XXI century. So far it submits international patent applications in a number that is 7 times smaller than the number of the same submitted by Korea and 70 smaller than the US. The share of expenses on technological innovations in the cost of industrial products amounts to 1.16% in Russia. Compare it with the same indicators for Germany — 5%, Italy — 2.3%, Spain — 1.4%. Innovative products constitute less than 1% in the GDP of Russia. In Italy, Spain and Portugal they constitute 10 to 20%, in Finland — 30% [*Nezavisimaya Gazeta*, 2007, January 24].

In 2005 earnings from the export of Russian technologies reached the figure of 89 million US Dollars while payments for the imported technologies amounted to 954 million US Dollars. These figures are almost at the level of Portugal (559 and 910 million US Dollars respectively). But in Switzerland, for example, these indicators are at the level of 7.5 and 8 billion US Dollars, in Great Britain — 29 and 14 billion US Dollars, let alone the US — 57 and 24.5 billion US Dollars [Science Indicators, 2007].

In view of the fact that these indicators characterize, as one may say, the «net output» of trade in innovations, they do not allow to assess the scope of the problem, i.e. the ten-fold lag to say the least, meaning that a great lot of work has to be done. Jeremiads about scientists being deprived of working in pure science and being urged to generate innovations sound like whimpers. The lost paradise is 4 million people engaged in R&D and among them 1.5 million of those who had been science workers in the USSR and who had been «appeasing their curiosity at the expense of the state» (an expression used at that time). Interrelation between discovery, invention and innovation is very complex and vague. Practical tasks quite often give an impetus to scientific discoveries. Linear programming, as is well known, started from the moment when L.V. Kantorovich solved the problem of optimal cutting of materials in the Leningrad Plywood Trust. The society can support a certain number of talented scientists who are not in the humor for coping with practical tasks as long as they show promise or after they have lived up to the expectations. But how many of them should be there? Apparently, just a few. The others would have to respond to the «despair» of the real economy that needs innovations in order to raise the level of its competitiveness. Success in both life and science most probably awaits those who are able to demonstrate their ability for creative work in this field.

Establishment of a powerful industry of innovation consisting of numerous small enterprises engaged in the translation of the ideas of scientists and inventors into sellable products is the primary objective of our economy. I anchor my hopes on the Start Program which is being implemented by I.M. Bortnik's fund, on the venture funds that are currently being set up, on other undertakings in this sphere, and also on the generalization of experience which would allow to identify the new and viable forms for the development of innovative industry.

Full set of conditions required

And let us pose the following question to ourselves. Supposing that all the foregoing reforms in education, science and innovative industry are carried out and that all of the required funds are allocated for the purposes of this reform, will this ensure the creation of innovative economy in Russia as powerful as the innovative economies of the US, Europe or Japan, say, in the next 20—30 years?

I would answer “yes, with a high degree of probability”, but only if the all of the above mentioned conditions—those that are directly required for such economy and that indirectly support it—are met in an adequate scope. At the same time the freedom of creative work and

entrepreneurship, as well as the competitive environment are required. Reliable protection of property rights, including intellectual property rights and support of contracting discipline are required as well. Market mechanisms will not be able to operate without all this. Protection of the rights and freedoms of an individual is required, first of all, in an individual's relationships with the state. This, in turn, requires subordination of the state power to the law, supremacy of the law and independence of the judiciary. It would take us many an effort to attain these goals.

This determines the requirements for the political system which must leave out any abuse of the law or the authority of judicial and law enforcement bodies. This, in turn, leaves out any excessive concentration of power and demands political competition within the constitutional framework. All this is called **democracy** that does not require any adjectives.

I am aware that the dependence of the innovative economy on all these factors and, especially, the links between successes in science with democracy, will have their opponents and skeptics. Their basic arguments will be drawn from the Soviet-era practices when scientists sometimes worked in «sharashkas» (special prisons for scientists) where they made discoveries of international significance. My answer will be as follows.

First, the Stalinist period in the development of the country was preceded by the great revolution. In any case this is how it was perceived by a substantial number of its contemporaries. This revolution, perhaps not at the level of its leaders but at the level of brainpower, was both a symbol and a promise of freedom. By killing ones it was giving way to the science to others who were coming from all strata of the society. This spirit of freedom and revolution gave an impetus to the enthusiasm of the 1920s when the human resource base of the Soviet science was formed. These human resources made their great discoveries in the 1940-50s. «Sharashkas» were needed to domineer over free people.

Second, times are fundamentally different now. In the industrialization age, when assembly lines and unification were at the peak of the civilization's achievements, it was much easier to set scientific and industrial priorities. Unlike today, innovations as such were not among the mass or individual products at that time. Uncertainty over future breakthroughs has grown substantially. The organizational era when an organization was equated to God has gone. Nowadays success comes out of diversity, out of freedom.

But this is not all. Economic, institutional and political systems in the country that intends to have a strong and competitive innovative economy, moreover, the country that intends to almost recreate such economy in order to meet the challenges of the new century must be supported by the society, by its fundamental forces. The formal institutions must rely on specific norms of social interaction that assume the adequate levels of responsibility, credibility, tolerance and solidarity adopted and demonstrated in practice by the majority of the society members. These are all very complex and delicate subjects which the social sciences have been trying to come to grips with for a long time. They are defined by the notions that are close in meaning but not identical, such as social capital, civil society, culture.

The answer to the question of whether the society is ready for modernization in the currently applicable meaning of this word or not depends on the status of these subjects, on their need for more or less serious changes, on the feasibility of such changes. If such changes are feasible, one should find out when and how they might take place.

3. Culture

I will head this last section of my report as «Culture» based on the assumption that this notion also encompasses such notions as social capital and civil society.

3.1. Social capital

Let us start from the social capital, all the more so that in the beginning of the previous section the existence of social capital was defined as the seventh and the last pre-requisite for innovative development which we have not discussed so far.

This notion was introduced into common use in the 1980s by D. Coleman and R. Putnam [Coleman, 1988; Putnam, 1996]. The meaning of it was that the accepted norms of social interaction by analogy with physical capital is of some value to the economy since it contributes to its efficiency. At an earlier stage the same analogy led to the emergence of the notion of human capital since not only the existing workforce was of importance but also the people with certain qualifications, skills and competencies. According to Coleman, social capital takes part in the generation of human capital and is essentially one of the components of human capital.

The meaning of it is that the success of collective actions or the welfare of some community largely depends on credibility among its members. As demonstrated by the accumulated collective experience, when the actions of everyone are taken with consideration to the interests of everyone else, whether distinctly or indistinctly apprehended within the framework of behavioral norms, the actions taken by everyone else in accordance with these norms are of advantage to all. Therefore, trust and trust-supporting responsibility turn out to be the productive force. This is where we come to the “prisoner's dilemma”: when a prisoner trusts his accomplice who is isolated from him in another cell he will plead not guilty and they will both get a lesser sentence. But when one of them does not trust the other, one or both of them will either admit an offence or cross each other. The outcome will be quite obvious.

Another dilemma of collective actions is the “fare dodger's dilemma”, i.e. dilemma of a person who decides to disobey the generally accepted rules in order to turn it to his account thus lowering the level of confidence in the rules and encouraging others to violate them. This is how the common advantage is lost.

Unfortunately, the actions of a fare dodger or the betraying prisoner are irrational from the viewpoint of current individual advantage and are therefore always in place in a greater or lesser degree. But there is something that stands against them in the erosion of credibility. First, these are the formal norms, i.e. the laws that are pillared by sanctions on the part of the state. The origins of all this and the way all this works are subjects of a separate discussion. But the people of this community may have tolerance along with credibility and responsibility. Tolerance will not allow everyone to immediately follow the fare dodger's lead thus ensuring the effectiveness of the rules, and the perpetrator, faced with condemnation on the part of those sitting near, would, as they hope, act otherwise. Moreover, I would mention solidarity, i.e. actions taken in order to help the others who have found themselves in trouble. Such actions generate the confidence in being helped whenever one is in trouble. Therefore, it is by no mere chance I have mentioned **credibility, responsibility, tolerance and solidarity**. In my view, these are the basic components of social capital. Cooperation is often mentioned among other components. Cooperation means those collective actions an inclination towards which enhances the social capital. But this is a consequence of the mentioned features.

In present-day research papers an emphasis is made basically on credibility. One of them [Lebedev, Tatarenko, 2007, pp. 110—111] examines *civil identity* as a component of social capital, meaning the civil identity that attributes personality (or many people) to a certain society,

people or country and the acknowledges any obligations towards the society as inward motives. This sentiment is close to solidarity. One can assume that this manifestation of solidarity is disseminated within a certain framework (civil identity — country, ethnic identity — ethnos etc.). L. Harrison talks about *social solidarity* and notes that social solidarity which is equated in progressive cultures with social identification and credibility, has a big radius that encompasses a vast social whole — country, civilization, all mankind. In traditional cultures identity and credibility extend to the family, the clan. Societies with a low level of self-identification and credibility are «prone to corruption, nepotism, tax offenses and are not prone to philanthropy» [Culture is of Importance, 2002, p. 294]. Or, as noted by N. Lebedeva and A. Tatarenko [Lebedeva, Tatarenko, 2007, p. 113], «cooperative norms, honesty, mutuality may be practiced in respect of small groups of people without affecting other members of the same society». Hence the valence (negative and positive values of solidarity depending on the credibility radius (the term used by Harrison)), from the border between insider-outsider attitudes. In his book «Who prospers» Harrison notes the familism (clientelism) that is traditional to the Latin American civilization where it encumbers the integration of society and the social solidarity. At the same time experts note a high level of civil identity, national pride and patriotism that play an important role in the economic development of the countries of the East Asian civilization.

R. Florida [2005, pp. 294—296] also casts doubts over the expressly positive assessment of social capital referring to some works which state that in cases when social capital goes beyond a certain limit, it comes into conflict with creativity. If you ponder this over, you may find arguments to explain this contradiction: social capital is an aggregate of informal social links that assume the public's obligation to be in line with the rules and the expectations of the others with regard to foreseeable behavior of a person or an institution (credibility). But creativity is most often associated with violations of the rules, and the freedom of creative work demands that violations of the rules are allowed or even encouraged.

It follows from the above that social capital is an essential and important phenomenon, but also a complex one. Again we face the balance, the optimum: there is an optimal size of social capital, and the attainment of this size is good for the development of the economy, including the innovative one, but its growth over this size may negatively affect the development of innovative economy if it excessively constraints the freedom of creative work.

Credibility level: Russia and the world

Research has just started. So far it is concentrated on measuring the credibility levels. The assumption is that credibility is in fact the social capital's basic component which is interrelated with all other components.

From the viewpoint of psychology, credibility is, first and foremost, a mental state, an emotion inherent to an individual. While in such state, we tend to rely on an opinion which seems authoritative to us, so we do not seek to justify it. Belief overweighs the strength of evidence that can be found. As opposed to belief, credibility is related to objects that exist in the frame of human cognition. Still a human being prefers to rely on some generally accepted opinion [Zinchenko, 2001, p. 6, 8]. Since a relatively homonymous sentiment can be shared by a great number of people thus affecting their behavior, credibility becomes a subject matter of both social psychology and sociology. But credibility is an economic category as well: expectation, a subjective probability of some subjects acting in accordance with acceptable norms and not to the detriment of the interests of those who are protected by such norms.

If credibility is the mental state inherent to many people, it can be reflected as a share in a sample of those who express credibility towards people as a whole or specific institutions in particular with regard to one issue or another.

Table 8 shows the World Values Survey data for 1990 along with answers to the specified question collected in different countries grouped by the above mentioned civilizations and various culture types.

Table 8. Answers to the question: «Can a majority of people be trusted?», in % to the number of respondents

Country	Definitely yes	Rather yes	Both yes and no	Rather not	Definitely not	Don't know	Sum of positive answers
European civilization							
<i>Scandinavia</i>							
Sweden	18.1	55.1	21.1	3.2	0.2	2.2	73.2
Denmark	20.0	60.6	15.6	2.9	0.3	0.6	80.6
<i>Anglo-Saxon countries</i>							
Great Britain (1990)	18.7	48.6	26.1	4.7	1.1	0.8	67.3
USA	20.2	52.0	20.1	4.9	0.6	2.2	72.2
Canada	26.6	52.1	16.5	3.0	0.4	1.5	78.7
Ireland	30.1	50.6	14.1	4.4	0.5	0.3	80.7
<i>Northern Europe</i>							
France	6.1	51.4	19.7	16.7	3.7	2.5	57.5
West Germany	14.9	44.7	11.9	14.6	2.6	9.2	59.6
East Germany	17.8	47.2	11.7	16.2	6.3	1.3	65.0
Netherlands	12.7	43.6	34.9	6.4	1.2	1.0	56.3
<i>Southern Europe</i>							
Italy	3.2	35.4	39.6	15.6	4.6	1.7	38.6
Spain	20.9	43.3	36.4	5.8	2.1	1.5	64.2
<i>Eastern Europe</i>							
Czech Republic	2.1	44.8	37.3	14.7	0.9	0.2	46.9
Poland	9.3	47.9	27.6	8.7	0.9	5.7	57.2
Hungary	16.9	34.4	36.6	9.9	2.0	0.5	51.3
Romania	18.0	34.3	31.4	13.6	2.5	0.3	52.3
Bulgaria	35.6	36.7	11.9	10.7	2.7	2.4	72.3
Estonia	19.9	57.4	9.9	6.1	1.9	4.8	77.3
Latvia	31.0	37.9	10.2	4.4	0.7	15.9	68.9
Russia	14.2	23.7	23.8	11.6	11.8	14.4	37.9
<i>Eastern Asia</i>							
Japan	3.8	45.1	35.9	8.9	0.4	5.9	48.9
South Korea	25.9	48.0	20.6	4.6	0.6	0.2	73.9
China	11.5	52.8	28.7	5.2	0.3	1.5	64.3
<i>Southern Asia</i>							
India	55.5	34.3	7.8	1.2	0.5	0.6	89.8
<i>Latin America</i>							
Argentina	23.2	34.1	18.0	19.2	4.3	1.3	57.3
Brazil	13.2	48.4	14.2	11.0	10.5	0.7	61.6
Mexico	24.6	44.6	22.0	5.9	1.9	0.9	69.2
Chile	16.0	48.3	16.8	15.3	3.5	0.1	62.3
<i>Africa</i>							
South Africa	15.4	19.1	31.9	13.5	17.1	3.1	34.5
Nigeria	6.2	33.0	10.1	25.5	23.8	1.5	39.2

Source: World Values Survey, 1990.

Values of credibility level are very sensitive to the methodology of their measurement, especially to the formulations of questions and proposed answer menus. For example, one of five answers to the question «Can a majority of people be trusted?» is to be chosen, as shown in table. The share of positive answers to this question in Russia in 1990 («yes», or «rather yes than no») was 37.9%, while the same share in South Korea was 73.9%. When three types of answers

to this question were proposed («yes», «no», «don't know»), the results were different: 25% for «yes» in Russia in the same year and 60% in South Korea. The reason for this is quite clear: the choice is limited and it is harder to define one's position. This is where the comparability of methodologies is important. All these data demonstrate a high level of credibility in Scandinavian and Anglo-Saxon countries. This level is slightly lower in the northern part of continental Europe and much lower in the southern part of Europe. In the Baltic states it is close to the Scandinavian level and in other Eastern European countries it is close to the level of the western part of the continent. The same picture applies to Latin America.

India has the highest level of credibility. It is also high in China and South Korea. But in Japan it is one of the lowest. This fact shows that the credibility level has no link with the well-being of a nation. Nevertheless, it seems to somehow reflect the dynamism of a society, either optimistic or depressing expectations of its members.

Russia is at one of the lowest positions (the aggregate of positive answers is 37.9%). Only South Africa ranks lower. Italy and Nigeria have similar figures.

No link is seen between the credibility level measured by this particular method and specific features of any civilization or culture. Perhaps other measurement instruments are required. But this indicator is suitable for characterizing public sentiments in social and psychological climate. Having looked at this table, we can pinpoint the countries that are in the state of institutional and cultural crisis: South Africa, Nigeria, Russia and Italy have the lowest credibility levels (lower than 40%), in Japan and Czech Republic they are lower than 50%.

We do not have any data that would enable us to examine the dynamics and undertake a country-to-country comparison of this indicator. But we know that in Russia the same question with three answer options («yes», «no», «can't say for sure») show the following dynamic of «yes» answers:

1989	54%
1990	25%
1991	36%
1995	24%
1998	22%
2005	22%
2006	22%

In 1989 Russia was already sliding into a severe transformational crisis, but the public was full of optimistic expectations at that early stage of democracy, transparency etc.

A sharp downfall followed: expectations were not met, the economic situation clearly deteriorated showing no prospects of a major breakthrough. In 1991 there was a certain upswing in public sentiments due to revolutionary changes, but after the start of economic reforms and their bad after-effects, numerous cases of fallacious hopes, deceits, rapid growth of social inequality, the credibility level fell even lower.

But the surprising thing is that in spite of the economic upturn in Russia, growth in prosperity, reduction of poverty and the invariably high reputation of the president according the opinion polls, the credibility level is still at the very same lowest point. Although the latest data obtained by Levada Center in December 2006 show some positive shifts—29%.

Social cynicism

The above mentioned facts confirm the frequently expressed idea that sentiments of social cynicism prevail in the society. This idea

was expressed by M. Bond and C. Leupt as one of their social axioms. They characterized it in the following way: destructive consequences of having power, authority, wealth that force some people to move along the lines of egocentricity and indifference towards fellow compatriots. Futility of any expression of benevolence towards other people and the inevitable failure of charitable activities and strenuous serving the cause of the common good [see Lebedeva, Tatarko, 2007, p. 51]. People are confident of being surrounded by hostile, egoistic and imperious individuals, groups and institutions that oppress and suppress them [Ibid., p. 54]. The only reasonable type of behavior is to limit the scope of your communications within the society or become one of those who surround you. Of course, I do not mean all aspects of life, but one predominant aspect of the world outlook. This phenomenon is both extremely important and dangerous for today's Russia.

Confidence in public institutions

So far I have been discussing the so called “*horizontal credibility*”, i.e. credibility between people in their equitable and partnership-based relationships.

But let us now take a look at the “*vertical credibility*” in the relationships between people and public institutions, both governmental and non-governmental. If we take the data from World Values Survey once again, we will be able to see that **Russia is characterized by an extremely low level of credibility along these lines as well.**

Table 9 shows the data on the levels of credibility in respect of public institutions. These levels are measured by a share in the sum of the first two positive evaluations (full confidence + confidence in most cases) among respondents.

I have intentionally demonstrated the full table hoping that some readers might have an intention to analyze it, others may simply omit it. I have just briefly summarized these data.

Let us take the average levels of confidence in public institutions in the countries of different civilizations and cultures. They are shown in Table 10 which is a folding of the previous table.

This grouping of data allows seeing the poles of the level and the structure of vertical credibility: these poles are the European civilization and China. In the former we see a relatively low level of confidence in the executive and the legislative power and a much higher level of confidence in justice and police, i.e. the institutions that protect the rights and freedoms of citizens; high status of education, relatively low authority of the church, low level of confidence in mass media, trade unions and especially political parties (I suspect that the last few examples are, in fact, the examples of sound skepticism over the functioning of these institutions caused by many years of contacts with them, but it is not the negation of their role.); relatively high level of confidence in business (I believe that such structure of vertical credibility is typical of mature democracy, but perhaps some difficulties of adjustment to the innovative development should be taken into account. It is characteristic that almost the same structure is typical of Japan.).

China: all institutions enjoy a high level of credibility, with the exception of religion the role of which is traditionally unimportant (the situation is almost the same in Japan.); leaving religion aside, the only credibility figure that is lower than the corresponding figure for Europe is the one that shows confidence in business. Press and TV are trusted more than anywhere else (Probably, the reason for this lies in the restrictions on the freedom of mass media plus official propaganda. Manipulations with public conscience bring about a maximum effect. Such structure of vertical credibility is quite typical for totalitarian regimes.).

Table 9. Trust to public institutions (World Values surveys, %) (sum of the two groups who trust most)

Countries and years	Institutions											
	Governmental					Non-governmental						
	Government	Parliament	Justice	Police	Army	Church	Education	Press	Television	Trade unions	Political parties	Major companies
European civilization												
<i>Scandinavia</i>												
Sweden	41.4	50.2	59.8	75.3	44.3	43.3	67.0	45.4	48.1	41.2	27.7 (1996)	60.8
Finland	31.0 (1996)	43.0	64.5	89.6	57.2	83.9	88.0	35.9	49.8	51.5	13.4 (1996)	40.9
<i>Anglo-Saxon</i>												
Great Britain (1999)	–	34.1	47.9	68.6	32.6	81.7	65.0	15.7	–	25.4	–	35.8
USA (1999)	37.3	37.1	35.4	78.1	74.2	81.0	53.6*	26.6	24.4	36.3	22.0	52.7
<i>Northern Europe</i>												
France (1990)	–	43.4	55.6	65.1	47.8	54.4	63.7	37.2	–	30.1	–	60.0
West Germany (1999)	23.5 (1997)	33.4	62.4	74.4	40.3	53.9	53.5	34.6	22.5 (1997)	34.9	13.5	31.6
East Germany (1999)	16.6 (1997)	37.8	48.3	64.5	23.3	43.5	75.7	36.6	20.5 (1997)	33.4	9.8	40.8
Switzerland (1996)	50.3	41.4	64.5	76.6	37.0	47.8	–	21.8	30.4	32.8	25.4	37.3
<i>Southern Europe</i>												
Italy (1990)	–	31.6	31.8	66.6	63.1	47.5	48.2	39.2	–	33.5	–	61.9
Spain (1999)	30.1	43.3	40.9	53.7	41.1	42.0	65.2	40.0	38.3 (1995)	25.2	17.9	31.6
<i>Eastern Europe</i>												
Poland (1999)	36.2	64.4	39.4	53.5	68.0	64.4	39.3	44.5	45.3 (1997)	29.7	11.0	40.7 (1997)
Hungary (1999)	42.4	32.6	43.8	44.8	46.9	44.6	61.3	30.2	39.7	21.7	29.1	32.7
Slovakia (1999)	41.1	38.6	32.4	42.3	74.6	72.0	72.1	46.8	49.8	35.4	20.9 (1998)	28.9
Romania (1999)	20.1	18.2	37.7	14.7	81.9	80.2	57.2	36.1	47.3	23.9	13.0	29.4
Bulgaria (1997)	56.0	42.2	35.6 (1997)	48.2	51.8	75.8	52.0* (1990)	41.9	63.2	26.8	26.7 (1996)	24.3
Latvia (1999)	37.4	26.3	43.6	19.8	51.2	43.4	55.5	68.6	56.9	25.2 (1996)	9.8	38.6
<i>Russia</i>												
(1990)	–	24.0	37.7	34.1	65.9	60.5	51.9	42.1	53.2 (1995)	45.1	40.6	42.4
(1999)	24.9	18.9	35.8	28.4	64.5	56.4	68.3	29.3	45.8 (1995)	27.2	17.6	16.8
(2006)*	33.0	33.0	24.0	31.0	44.0	51.0	–	44.0	–	24.0	21.0	26**
East Asia												
Japan (2000)	25.4	19.7	76.1 (1995)	48.1	62.5	9.0	48.0	70.2	65.1 25.2 (1990)	33.5	16.5	24.3 (1995)
South Korea (2001)	28.9	10.2 33.9 (1990)	58.4	49.0	62.4	46.6	63.8	64.9	62.5	49.1	10.1	28.4
China (1990)	95.2	90.2	74.3	71.3	87.9	4.5	91.2* (1990)	64.3	71.2	43.0	86.3	42.3
South Asia												
India (2001)	48.5	41.6	16.8 (1995)	34.0	83.3	78.9	72.6* (1990)	72.6	51.9 (2001) 20.0 (1990)	35.9	28.1	32.2
Latin America												
Chile (2000)	56.9	34.1	44.3 (1996)	54.7	40.5	77.8	73.4	47.4	52/3	43.8	26.9	48.8
Brazil (1997)	48.2	33.3	54.7	44.9	70.0	73.8	–	61.0	57.1	53.9	32.2	66.9

Countries and years	Institutions											
	Governmental					Non-governmental						
	Government	Parliament	Justice	Police	Army	Church	Education	Press	Television	Trade unions	Political parties	Major companies
Islamic countries												
Turkey (2001)	45.5	46.4	69.7	70.4	85.2	61.1	–	34.8	36.9	49.8	28.2	48.1
Bangladesh (1996)	77.2	77.0	71.9	36.1	51.9	97.1	–	64.2	60.5	37.0	65.5	52.6
Sub-Saharan Africa												
Nigeria (2000)	46.5	43.0	45.0	34.3	45.8	94.7	83.4	62.8	55.9	63.1	42.7	68.8

Source: World Values Survey.

* In 2006 survey by the Levada-Center, the answer “partly trust” was used, which can be interpreted as a combination of “rather trust” and “rather don’t trust”. Therefore, for the sake of compatibility, here we provide an indicator of the level of trust calculated as the sum of “entirely trust” + ½ “partly trust”, approximated to the positive answer. Besides, in 2006 survey, trust to the court was used instead of justice, and the State Duma – instead of the parliament.

** Trust the Russian business in general.

Table 10. Average levels of confidence in public institutions in some civilizations and countries, %

Institutions	Western Europe and North America	Eastern Europe	Russia (2006)	China	India	Brazil	Japan
Governmental institutions							
Government	33.8	40.4	39.0	95.2	48.5	48.2	25.4
Parliament	36.8	34.0	33	90.2	41.6	33.3	29.7
Justice	51.0	46.0	30	86.3	66.8	54.7	76.1
Police	72.4	42.1	31	71.3	34.0	44.9	48.1
Non-governmental institutions							
Education	65.9	54.6	68.3 (1999)	91.2	72.6	–	48.0
Church	49.3	70.9	51	4.5	78.9	73.8	9.0
Press	33.7	44.7	46	64.6	72.6	61.0	70.2
TV	33.9	50.4	–	71.2	51.9	57.1	65.1
Trade unions	35.0	31.3	24	43.0	35.9	53.9	33.3
Political parties	19.0	18.4	21	74.3	16.8	32.2	16.5
Major companies	52.0	39.0	26	42.3	32.2	66.9	24.3

Other countries and cultures lie between these poles. In Eastern Europe people trust government more, but they trust courts and police less. Church and mass media enjoy greater authority here, but there is a smaller trust in business. Obviously, such are the consequences of the communist domination: church has gained influence as an ideological alternative, distrust of justice and police is a reflection of their status after years of cynical attitude towards law inherent to the communist ideology.

India is a democratic country, but a poor one. It has a large share of uneducated, uninformed population that is placed outside the social life. It trusts its government and justice more (a sign of British heritage), but trusts police less. Here we see the highest level of confidence in church (in Bangladesh it is even higher), as well as in mass media. Brazil has a similar vertical credibility structure.

As for Russia, which suffered from major upheavals in the late XX century, we have three measurements. The last one, as noted above, was made by Levada Center in 2006 under the order of the Public Chamber. As for the public institutions, it is somewhat different from the measurements published in 1990 and 1999 in World Values Survey. 2006 measurement also demonstrates a rather low level of confidence in public institutions. In fact it is lower than anywhere else, except Japan. But there the level of confidence in justice and police is noticeably higher, just like in Europe. On the other hand, our president enjoys a high level of credibility

(72%), which obviously pulls in a part of the confidence in all other government institutions. They, in turn, pull back discontent from the president. One can assume that this is a feature of any authoritarian rule in the apogee of its power. Just like in Eastern Europe, we have a high level of confidence in church, but since 1990 when the level of 60.5% it has been slowly boiling down (56.4% in 1999 and 51% in 2006) in spite of the efforts of the authorities and those who surround them to enhance the role of the main religion. At the same time confidence in education is growing.

Therefore, the current situation in Russia is characterized by a low level of confidence in main public institutions. Here we see the confirmation of the diagnosis of prevalent social cynicism.

Credibility radius

This term means a circle of persons, groups, agencies that enjoy a certain degree of confidence on the part of a particular subject, along with certain degrees of responsibility and solidarity. Its meaning can also be explained in the following way: when a person trusts only his close relatives and friends, he is sensible of responsibility only in respect of them. They are the only ones towards whom he stands ready to express solidarity. He thinks of them as «our people», while all the others are «aliens» who are not worthy of being trusted. Therefore, the credibility radius of such man is not big. When a man or some community feels confidence towards public institutions that do not necessitate any direct contact with them, but knowledge of their role is in line with the expectations of many other people, then his credibility radius is big.

Small credibility radius is typical of traditional, patriarchal society. Such radius provides a direct connection with those one knows and, possibly, those who rank higher in the social hierarchy — nobleman, master, tsar, all those who have power. In a democratic society with market economy the credibility radius is much bigger, it establishes links with everyone who obeys the acceptable rules of behavior, be it contractual obligations, public duties or rules of morality. Public institutions are appersonified: respect is shown not only towards a specific judge but the institution of court, not only a deputy of a specific political party, but the institution of parliament, not only a specific businessman, but any party to a transaction. Confidence in them is expressed because the majority is sure: it is more beneficial to trust, even when there is a certain number of fare dodgers. Progress in the world in the new times has particularly been demonstrated by a bigger credibility radius.

We can identify the following spheres of interaction with the outworld:

Sphere I — family, closest friends, sphere of continuous communication.

Sphere II — sphere of direct contacts:

- house, neighbors;
- work, organization — place of work, colleagues;
- other organizations the services of which one resorts to (shop, restaurant, theatre, local department of interior);
- public associations that unite people of specific interests, opinions or beliefs (church, political party, trade union, association of beekeepers, national community, self-educational association). Such associations are set up on voluntary basis with a view to enable people to help each other or collectively address some specific issues.

Sphere III — city, district, municipality, their authorities. One contacts them less frequently, as this is the sphere of relatively rare or indirect contacts a need in which arises as and when

necessary, in particular, with regard to any issues related to the house, work, service enterprises etc.

Sphere IV — oblast, territory, republic, i.e. region and its authorities. Contacts with them are even less frequent. They are established only in cases of issues that go beyond the terms of reference of local authorities. This is the instance which can be resorted to if the issues are not addressed in Sphere III.

Sphere V — country, state, i.e. the highest instance, the bearer of the national sovereignty and the level at which nationwide laws, codes of conduct and enforcement regulations are created. The aggregate of them turns a great number people into a society, a civil nation.

Sphere VI — international institutions and covenants that are considered as having priority over national laws. Individuals apply to them on very rare occasions, mostly to the European Court for Human Rights in Strasbourg.

Each of these spheres has its own sphere of activity and its powers. And each of them has a credibility radius: Sphere I has the smallest — Sphere VI has the biggest.

The metrics for the credibility radius have not been developed in any way. So far credibility indicators for public institutions have been used instead of it. It is clear that such metrics will become conventional when necessary and will be based on an agreement reached by the international science community.

The following metering pattern seems to be more or less natural: credibility rating scale of, say, 100%, is assigned to each of the above listed spheres. Permanent co-relations between the scales for different spheres are set at the initial stage. The importance of credibility in each sphere is taken into account in these co-relations. Let us assume that the value of each co-relation is 1. Moreover, it would be advisable to consider the average frequency of both direct and indirect contacts (interactions) in each sphere (including contacts established via mass media and voting at direct or indirect elections when elected representatives, i.e. deputies, vote in the delegate bodies of a city, oblast or country).

Therefore, the aggregate level of credibility can be demonstrated as follows:

$$\bar{L}_{ij}^c = \frac{\sum \alpha_{ij} \cdot l_{ij} \cdot N_{ij}}{\sum \alpha_{ij} \cdot N_{ij}},$$

where α_{ij} is the rating of the importance of credibility in a sphere of a country, l_{ij} is the level of credibility in a sphere of a country, N_{ij} is the frequency of contacts (interactions) in a sphere of a country.

Let us proceed with the understanding that the measure of credibility resource in the co-relation between the average credibility levels in Spheres III to VI (or V if we talk about changes on countrywide scale) and the average credibility level in Spheres I and II. Such understanding seems to be natural if we want the credibility radius to be of the dimension that has a minimal value at the concentration of confidence within narrow groups of direct contacts (Spheres I и II) and a maximum value when confidence towards public institutions becomes equal to or even greater than confidence within such narrow groups.

$$R_{ij}^c = \frac{\bar{L}_{i,j=3,4,5}^c}{\bar{L}_{i,j=1,2}^c}.$$

At present I do not have any data enabling me to make calculations. Special research work is required, and quite a number of problems would have to be solved in the course of this work. At this point I will only give you a simple example. Table 11 shows conventional source data for two options available for calculations. One of them uses the indicators taken from a survey made by Levada Center (October 2006) with regard to confidence in local, republican and federal authorities.

Table 11. Data for the conventional calculation of credibility radius

Sphere of interaction	Significance ratio	Average contact frequencies	Credibility level options, %	
			1	2
I: family, close relatives, friends	1.0	10 000	90	90
II: work, neighbors, public associations	1.0	1 000	60	60
III: local authorities	1.0	100	34	60
IV: regional authorities	1.0	30	38	50
V: federal government	1.0	100	39	50

Here's what we get (for option 1 with the actual credibility level data for local, regional and federal authorities, the other data are conventional):

$$r_{11} = 0,42 \text{ in unit fractions; } 4.2 \text{ points (in ten-point scale).}$$

$$r_{12} = 0.587 \text{ or } 5.87 \text{ points.}$$

If we calculate the credibility radius for China where all public institutions, for some reason or other, enjoy the credibility level of 70—80%, the credibility radius in our conventional example would score 8—9 points. This will most probably be a reflection of a low degree of awareness and freedom of response to actions taken by the authorities. We can assume the existence of the level and the radius of credibility that are optimal for specific conditions (country, civilization) in which the best possible combination of order, freedom, regulation and creativity is reached.

Responsibility and participation

In order to characterize the social capital in greater detail let us take advantage of some other data from the above mentioned survey made by Levada Center (see Tables 12, 13, 14).

Table 12. Responses to the question «Do you feel your personal responsibility for the events that take place in...?», % to the number of respondents

	In full + to a significant extent	To an insignificant extent + do not	Don't know
In the family	94	5	1
At work	45	37	18
In the house you live in	40	55	5
In your city (district)	15	79	5
In your country	10	82	8
In the world	6	84	10

Source: Levada Center, October 2006, N = 3000.

We can see here that responsibility extends to the same spheres of interaction as credibility does and in presumably the same proportions. Therefore, one can talk about the *responsibility radius*.

The difference is that the responsibility radius will vary depending on the powers vested in one sphere or another. Almost the same things can be said about an ability to influence the events that take place, i.e. on the *influence radius*.

Table 13. Responses to the question «To what extent can you influence the events that take place in..?», in % to the number of respondents

	In full + to a significant extent	To an insignificant extent + cannot	Don't know
In the family	90	9	1
At work	36	47	17
In the house you live in	32	64	4
In your city (district)	8	86	5
In your country	3	90	7
In the world	3	90	7

Source: Levada Center, October 2006, N = 3000.

We can see that the influence radius is smaller than the responsibility radius. The proportions of their application to different spheres are natural, closely linked to credibility levels. I believe that these proportions will also apply to all countries with certain variations. It should be expected that responsibility and influence in democratic countries would extend further, even if the opinion polls would show a different picture, like the one related to credibility in China.

Responsibility and influence are closely linked to the *participation* of citizens in public affairs. As is known, there is a difference between the *democracy of participation* and elitist democracy (according to J. Schumpeter), the first of which is based on a high level civic engagement [Cohen, Arago, 2003, p. 24]. It is obviously associated with the participation of people in the activities of public associations — from political parties to clubs that unite people who have common interests, the local branches of which are included in Sphere II.

Table 14. Responses to question «Do you often see the readiness of people to unite with a view to solve their own problems or common problems that do not affect them personally or, in general, their readiness to help each other?», in % to the number of respondents

	Very often + Rather often	Seldom + never	Don't know
Own problems	18	75	7
Common problems that do not affect them personally	9	80	11
Readiness to help each other	24	72	4

Source: Levada Center, October 2006, N = 3021.

Table 14 essentially contains a characteristic of the readiness of the Russian citizens to take part in the activities of public associations. As we can see, its level is not high. The following percentage of respondents directly participate in the activities of the public associations engaged in the following spheres: development of residential areas — 14%; protection of property, residential, consumer rights and interests of local residents — 6%; associations of parents for supervision over secondary and infant schools — 15%; sports and tourist associations (clubs), drivers clubs — 14% [Levada Center, 2006, page 38]. According to Public Opinion Fund, only 2% of the Russian citizens are members of political parties and 79% have absolutely no intention to join any party, 67% do not think of themselves as followers of any political party [Vedomosti, 16 February 2007]. According to calculations, 10—12 million people are active members

of non-profit organizations, that is 8—10% of the population older than 15, and the potential for active public involvement is 25—30 million people [Public Chamber, 2007].

To compare: in mid-1990s public associations had the following membership: 82% of US citizens, 68% of the Germans, 53% of the British, 39% of the French, including those who worked there on voluntary basis: 60% of US citizens, 31% of the Germans, 26% of the British, 35% of the French [Levada Center, 2006, page 44]. The gap is 3-6 fold.

Therefore, by all basic parameters related to social capital Russia is behind the majority of the countries. This amount of social capital is definitely insufficient for innovative development.

3.2. Civil society

Now it is time to point out that the social capital properties, i.e. trust, responsibility, tolerance, solidarity, are also features and conditions of existence of a civil society. Responsibility is the other side of freedom. This is about the way V.V. Pozner finished his First TV Channel Program "The Times" on February 25 2007: «We agree that that the President would appoint governors, but let him be responsible for them. Because when we elected them, they would do whatever they wanted. Should we be responsible for them? But we do not want to be responsible». Yes, responsibility and freedom are a burden. Lack of responsibility is easier, but it is a destiny of the slave.

Solidarity, tolerance are a basis of participation. If you are willing to empathize others' problems and to show solidarity, to be tolerant of other opinions, you are ready to some extent to participate in deciding public issues. You become "a participant" in the decision. Then you can also count on solidarity and tolerance with other opinions.

When there are many participants, it is also a problem, especially if you need to take a competent professional decision. Such decisions are delegated by citizens through elective bodies to those who can be engaged by the bodies as an expert or a public officer. But there are such decisions which can not, must not be delegated to anyone if an individual wants to be free. This means that he can not give away opportunities or rights of his own development, which are the essence of freedom, to those who could use them in their own mercenary interests to the detriment of the society and the individual. Trust does not mean forgetting about temptations of the lack of control and the power to be inevitably exercised by someone.

We have two common opinions regarding the civil society. The first one says the society where all citizens are interested in social matters, actively involved in them and ready to sacrifice their own interests for the sake of social welfare. It is a shadow of the former vision of the communist society, a certain ideal which is usually destroyed when it faces a real conflict of interests of various people of the same society.

The second opinion is that there is no civil society in Russia—in the sense described above—unlike countries of the western democracy. Hence, we are not ready to democracy, to observing rights and freedoms of people, and so we need a strong power, a strong State which substitutes institutions of the civil society while they are absent or do not work.

These opinions are both contradictory and supplementary: while the liberals say that we do not have a civil society and, therefore, they are not voted for by the electorate who does not value freedom, authoritarian regime representatives state that while the society has not matured, they will be at the power. And this means that the society will never be mature, since the authorities will deprive it of any legal way of protection and public expression of its rights and freedoms.

I stand on another definition: a civil society is a society of individuals who are ready to protect their interests, rights and freedoms and, to this end, able to get united into various associations

that are independent of the State. Such a civil society is not a nice dream, a utopia to be sought till Greek calends but the reality, sometimes hard, full of contradictions, conflicts of interests, but producing the culture of compromises and solidarity which enable people to live together.

This definition correlates with the idea about a civil society as a combination of such associations or public non-governmental non-profitable entities but it is not the same. The difference is that independent associations do not just evidence a civil society, but primarily its citizens who volunteer to be involved in them in order to protect or promote their interests, to become active participants of social life. Such organizations facilitate developing such individuals' features (trust, responsibility, tolerance, solidarity) which are social capital components.

The civil society unlike the social capital always correlates with the State. Independence of civil society's institutions is thought as independence of the state. If there are conditions for such independence, there is also a civil society. If it does not exist, whether due to pressure by the State or due to society members' passivity, unwillingness to protect their interests and rights, the civil society does not exist either.

The State presumes there is a political system in place - authoritative, democratic, whatever, - and therefore, there are certain groups, associations, parties which fight for the power. They are a part of the political system. But the power is the essence of the State since it gives the right for a legitimate violence, which is an attribute of the State.

The civil society is represented by entities which do not fight for the power. Therefore, being such, they are political by no means in the democratic state. But in the authoritative state where any protection of group interests, any independence can be considered an assault against the authority's position, civil entities can without any effort from their part become politicized. Anyway, their activity can easily be interpreted as political. This is due to the fact that the because of independence, the civil society in a certain sense is in opposition to the state, seeking to subject the power to interests of the citizens, not to allow it to abuse the right of legitimate violence.

We should remind that here we consider the civil society from the perspective of its willingness for modernization. We can suppose that if the civil society facilitates development of appropriate components of social capital through its institutions and entities, and provides for the control over the way the State exercises its powers, it increases the society's willingness for modernization, facilitates development of innovative economy, in general.

In the West, there is also another attitude: the civil society existed in Europe in XIII—XIX centuries when "democracy of tax payers" prevailed, i.e. only educated and wealthy layers of society could take part in public affairs. And now, we have the mass society, popular suffrage. It provides opportunities of civil participation even to those members of the society who do not seek it and do not have adequate qualities, i.e. public awareness, interest, responsibility. There is a need to manipulate such people with available tools: the Mass-Media, show entrepot, charismatic personalities eager to be a dictator [Civil Society, 1998, p. 16]. As we said, everybody's participation is not always required. Everything appears to be not so simple.

We are speaking of real problems. Nevertheless, at a various degree, a civic society exists in all democratic countries, and plays an important role in preserving and developing democratic institutions. Upon transition to an innovative and creative economy, its influence would increase, specifically because it would need to have the state in leash to avoid excessive regulations that resist freedom and creativity.

I am convinced that the civic society as defined above exists in Russia. But our civic society is still weak, because it is traditionally oppressed by the State, and because subjects rather than citizens prevail in the society. A. Almond and S. Verba wrote about civil culture as a combination

of three cultures: “parochial” (or communal) in which no clear differentiation of political roles exists, “subject” in which the citizen stands in largely passive relations with the state, and “participant” which meets the requirements of “participant democracy” [Yasin, 2006, p. 42—43]. Authors emphasize that the civic culture is mixed, many citizens are actively involved in public matters, but others, the majority, are passive. Moreover, even active citizens still have certain subject and parochial orientations [Political Science, 2006, p. 274-275]. This conclusion is an important step towards the reality. Such combination, heterogeneity in various proportions, is very characteristic of the modern mass society: “participant”, “subject”, “parochial” orientations. According to reviews, there are many parochial orientations in Japan. The Japanese society has the village community stereotypes, a so-called “Wa” principle or harmony principle in English that is defined as the desire to settle conflicts, to avoid disturbances and to ignore the minority’s opinions [Civil Society, 1998, p. 40-41]. This principle was used by Toyota and other Japanese Corporations after the war, and it became one of the factors of the Japanese “economic miracle”. And now, I think, it has turned into obstacle.

I do not know what the “participants” share in the population is for the society to be civic. According to research data of 1970, in Japan, various public entities included 72% of the citizens. I think, this is the most popular indicator of the civic society development. In Netherlands, one of the recognized patterns of a civic society, the indicator is 56%, in the USA, it is 60%, and in India, which is also a democratic country, it is 16% [Civil Society, 1998, p. 40]. In our country, let me remind you, it is 8-10% [Civil Society, p. 73]. All the countries have very different cultures which impact interpretation of the universal meters applied everywhere to enable comparing.

Here are the conclusions for us. First, I say it again, the civic society exists in Russia as described above. Therefore, its lack is not an obstacle either for modernization, or for the democracy. The latter does not pre-condition the existence of the civic society, but refers only to “participant” democracy, more as a utopia. And there is also an elite democracy – or it is more accurate to call it “representative”, - which is predominantly the reality in the most of democratic countries, and it functions quite successfully. Second, our civic society is still weak, in it has few “participants”, but a lot of “subjects”. There are also people with the “parochial” orientation. This is the problem: the society does not oppose the state, it is weak in protecting its rights and personal freedoms, including the freedom of creativity. Third, the civic society is not an opponent of the state, but its counter balance. I agree that the modern civic society, as well as the democracy, is born by the market economy and the state. Dominique Colas refers to the state as **“a pre-condition for existence of the civic society”** [Colas, 2001, p. 300]. But from the perspective of suppressing the state’s pressure, a strong civic society would help develop the innovative economy, and its strengthening is a side of modernization. I would like to hope that the state’s oppression would result in a growing resistance of the civic society, and the practice of resistance would lead to its growing influence.

3.3. Culture matters

This was the title of the book published by the Moscow School of Political Studies in 2002 that included collection of works by prominent scientists-humanists under the Harvard Academy of International and Regional Studies project, with a subtitle: “How values facilitate public progress”. The authors actually tried to answer the questions raised at our current VIII Conference and in my report. But we are looking for answers specifically for Russia. Therefore, I entitled this part of the report with the same words.

Definitions

Culture is a so large and uncertain concept that we will not be able to fully define it. There are six classes of definitions of culture used only in anthropology. But it is not all. Here is another definition from the cross-cultural psychology: culture is everything created by the mankind [Gershkevich, 1955; Lebedeva, 1999, p. 23-24]. However, I'll dare to add one more definition which, I think, without contradict the others, would be useful for the purposes of this report.

Man as a biological creature originally could live only in a certain community of similar creatures. Therefore, originally there should be some mechanisms of regulating relationships in this community, which were realized by its members by instinct or in any other form. Accumulating the experience, everyone transferred valuable and helpful information to other members of the community. The information was stored in the individuals' memory, and it formed a certain common social memory that was passed from one generation to another and based on the past experience distinguished useful activities from the entire set of activities. The information was also used to assess new data distinguish between the useful and the harmful, the good and the bad. It seems that the good differed from the bad primarily in terms of survival of the entire community, rather than individuals, since the individuals were still governed by biological instincts, but in order to preserve the community, which was important for everybody's living, they also needed a social regulation to encourage useful actions and to condemn harmful ones. Certainly, there were mistakes. Those who made many mistakes disappeared. Those who were more successful in their choice were preserved to pass on the baton to their descendants. This constantly accumulating social memory, collective consciousness, in my opinion, is the culture in the loose meaning of the word.

My friend whom I discussed the idea with asked: How about material culture? When I thought, I came to the conclusion that both objects of material culture, from a machine tool or a computer up to works of art, are important for us not because of the material that plays a role of paper as data carrier, but because of the information which the material has. Useful computer properties or the Parthenon columns' aesthetics are accessible to us to the extend we are able to perceive this information which is a part of social memory.

But the culture is not the entire information which is in use. This is data of repeated use, to some extend, capital assets, long-term memory. They are also distributed by levels in line with the reference frequency and the preservation relevancy. I would differentiate between operative, short-term memory, i.e. memory with short period of relevancy; mid-term and long-term memories. In terms of social psychology the levels can be called:

- Operational memory: public mood, quite changeable. In general, it is not included into the culture concept;
- Mid-term memory: ideas and statements, descriptive and normative data. The institutions are norms that regulate or prohibit. The level includes basic elements of the social capital: trust, responsibility, tolerance, solidarity, etc.;
- Long-term memory: values, mostly of terminal character, which are not an assessment of means of achievement of any goals which are called instrumental values. Also, they are the most important institutions.

The data (knowledge) placed at the two bottom levels is rarely subject to changes, especially at the values level. According to E. Maiminas, this is a social and economic genotype that ensures stability of the community and determines its identity.

Schematically, the definition of culture is shown on Fig.2.

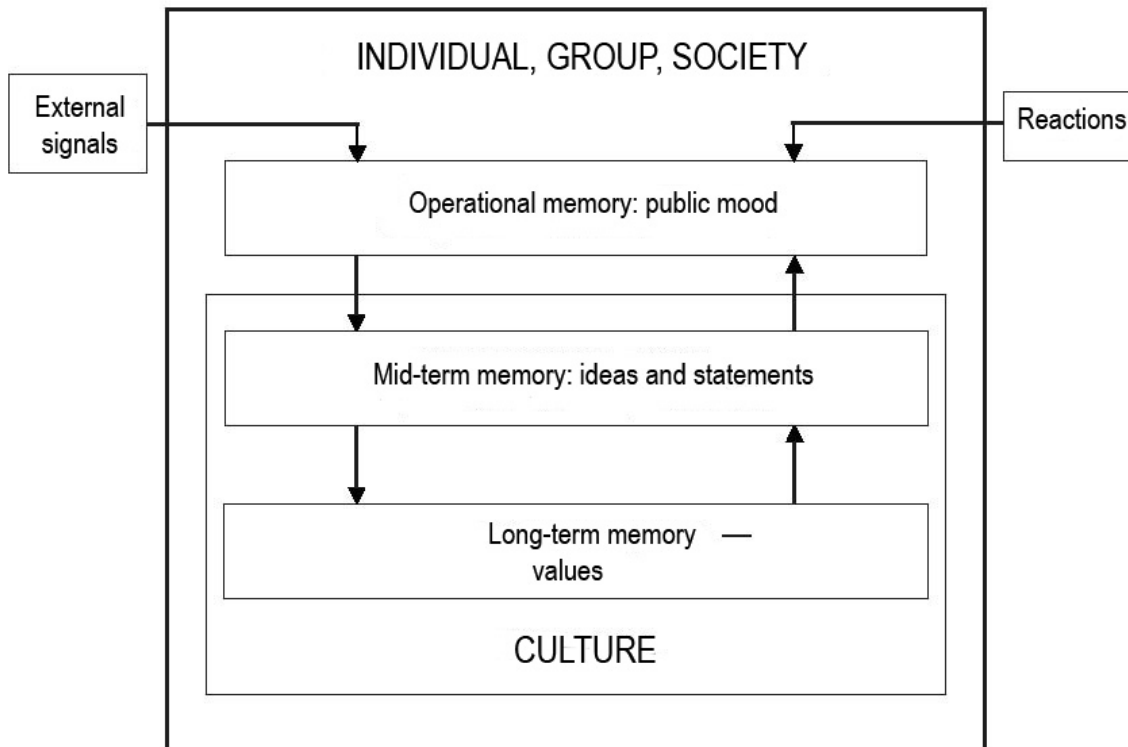


Fig. 2. Definition of culture

Another definition of culture provided by psychologists is that the culture is a combination of unrealized positions, values, norms and models of behavior which are acquired in such a degree that people do not dispute them. The culture is a behavior learnt [Lebedeva, Tatarko, 2007, p. 25]. This is quite unexpected, and, at first sight, it is not related to what has been said earlier. But we need a closer look.

According to the second definition, the essence of the culture is automatic reactions, the norms acquired at the unconscious, so to say, social and instinctive level.

Information that comes from superficial layers passes through an automatic and simple filter. Some information does not pass through the filter, and this may be some valuable information, the filter made a mistake in this case. But in general, it performs its function. Based on accumulated social experience, it cuts off redundant information to meet certain criteria which cannot be perceived by an individual or the community due to restricted throughput capacity. The picture of the world becomes simpler, but at the same time, it becomes more regulated, it is possible to retrieve some links in it, to accelerate decision-making. Automatic operation increases stability and complicates making changes. The culture is the world's model which allows everyday behavior to be rationalized at the social level. So we may reasonably conclude that the definitions consider the culture from different perspectives rather than contradict each other.

The major element of culture is the language. It is a tool of communicating and storing information, and of the community's self-identification, distinguishing between «friendly-foreign». As soon as we mention the language as a component of the culture, it becomes absolutely clear that there are many cultures. The understanding of distinctions between them is important at least from three perspectives. First, they can result in various results of development of the economic and the society, certain culture in a certain degree may be better-or worse than the others. Accordingly, we may speak of advanced cultures and backward cultures.

Secondly, cultures are hard to change by definition but still they change. Changes in cultures take place due to changes in the environment, economy, due to interaction of various cultures. Therefore, the principle question – “Is it possible to overcome cultural backwardness?” – should be answered positively, in any case, that it is possible to learn cultural achievements of other communities, other countries or civilizations or to develop own cultural achievements in order to liquidate advantages of other cultures in front of own culture from the perspective of development of the economy and the society.

Thirdly, there is always a painful contradiction between the tradition and the modernist style: we need to learn new ideas, institutions, values and at the same time, to try not to lose our identity. It is a key development issue. If it is resolved within the country, the community, there are contradictions between social groups, different parts of the elite that are committed to certain innovations or preferred traditional values. If the issue is resolved in interaction between the cultures, under a pressure from outside, any concession to new trends is perceived by a certain part of society as a threat to independence, to identity and dignity. Therefore, changes in culture are always difficult. Let's come back to the idea that culture primarily sticks together a multitude of individuals in the society and at the same time, makes them individuals in the degree they possess the culture. V. Zinchenko referring to L. Vygotsky, the founder of the cultural and historical psychology, an outstanding Russian scientist, says: “The culture gives man an instrument, relevant material and spiritual equipment for his behavior and activity. Knowing culture, the man gets to know himself and his behavior, **becomes the man** [Zinchenko, 2001, p. 13]. Development of culture that facilitates productivity and increases a variety of opportunities is the progress. It is an important element of a so-called *evolutionary paradigm*, which means that development from simple to complex, that is the essence of progress, is a postulate which can be the basis for studying the past and forecasting the future. Uniformity of development inherent in this paradigm, raises many questions, and the concept of progress has lost supporters recently [Ionin, 2004, p. 32], but nevertheless, despite periodic degradation of some cultures, in overall, the human culture that includes a number of cultures and civilizations developed.

But culture is not built under a project; it develops organically, putting various layers. Therefore, in this or that culture there are numerous, known from institutional theories, so-called QWERTY-effects which are occasions when widely spread and established institutions rather than the best ones are rooted. Therefore different cultures differ in productivity, development pace, and compete with each other.

Originally, each cultural framework had not only useful economic skills and practices, but also various, initially primitive forms of apprehension, regulated awareness of the world picture. People were exposed to numerous threats from Nature and their kind, and they always would like to know, how they could increase the security, achieve more in fighting threats. They could not wait for scientific knowledge and therefore, invented other available explanations to create, at least, an illusion of removing a threat, reaching a goal if some conditions are met. That's how beliefs and *myths* were born to establish traditions. “The first system” of human concepts, the mythology, seeks to explain the world, to make it convenient and harmonious for man, and this mythological substratum does not disappear in a civilized person's consciousness who persists in giving sense to nature and life chaos [Meletinsky, 1998, p. 537]. Zinchenko concludes that even a baby contacting emotionally with his mother in the imagination creates a certain paradise where he will be fed, if he is hungry, and cradled, as soon as he is sleepy. If not, he will imagine a small hell, and on what is born in his imagination depends what he will become when he matures [Zinchenko, 2001, p. 22]. And his development in a "package" reproduces the entire history of mankind.

First superstitions, then a number of gods, governing individual elements, then a god of the tribe, then few great religions that have been giving faith to millions of people that death should not be afraid of, one should live a dignified life observing certain norms and then the righteous person will have the right to the eternal life or new transformation. I think the main message of any

religion has a certain set of the rules that allow a number of people to live as a community and to co-operate for them to have less suffering and an easier and quieter living. Even now this is the major significance of culture. Therefore, even today religions are a key element in any national culture, even if the majority of its representatives consider themselves atheists and agnostics.

But religion is founded on the faith that is inspired to people by traditions, the church, and the state. The evidence proving the validity of faith is often miracles of a superior power. There is a whole system of restrictions, rituals, ceremonies, which observance would protect from troubles in this life and save in eternity. Preserving rules accepted once and for all turns out to be an important element of maintaining religion's authority in any confession. This causes frequent divergences of religious dogmas from living which originally led to Reformation in Europe, and then to formation and spread of rational, scientific and secular thinking. Although the legal system of social regulation was created long time ago, probably, after first states had appeared, but in the modern sense of the word it also emerged during the New Time, based on the natural right concept where faith is replaced with rational ground. Principles of Law sovereignty and Court independence have become the starting point of civic society and trust to public institutions.

This was especially necessary because of decay of both rural community, where visual social control was carried out, and the entire feudal system where suzerains acted as judge, and former social control in rapidly growing cities became impossible. Law, court and police became indispensable tools of social regulation that ensured normal living of the society. It is clear that if the institutions' work was not adequate, they lost trust, and crisis grew in the social life. Also, the institutions cannot regulate all social relationship. Where they do not penetrate, morals, ethos, should work.

Scientific and secular thinking suppressed religious consciousness. But I have to agree with Pope Benedict VI, who even being Cardinal Ratzinger wrote: "Science as such cannot produce ethnos. That is, a new moral consciousness will not appear as a product of scientific discussions" [Russia in Global Policy, 2006, 5, p. 21]. Disputing many issues, today, science and religion should cooperate in strengthening morals.

State of culture today

Meanwhile, the new moral consciousness is a quite urgent need, especially in our country. Science and education, even very well provided, will not resolve moral degradation which, I think, becomes one of the key problems for us. In fact, what conclusions should we draw from the above data on a very low level of trust and responsibility, tolerance, solidarity, and participation, characteristic of today's Russia, on widely spread social cynicism which has become a kind of secret credo of policy and business.

To me, here is an obvious example of how it is expressed; it has become a standard repeatedly used scheme, like tax evasion or property seizure schemes. Police, often from economic crime police, come to a Russian businessman, and say that a criminal case is initiated against him. There may be different charges, for example, recently it has been smuggling shell companies. Both parties know that if the proceedings start, the Public Attorney and the Court often take side of the State in interpreting the law with the purpose of conviction. They suggest that compensation - somewhere \$50-60 thousand for the small business - be paid. If you refuse, you'll be sorry. If the businessman pays off - and he has no choice - he may be offered a joint business: arrange counterfeit product smuggling and provide "a front". I will not give you names, but because there are many such cases, the scheme is typical. Just instead of smuggling, unpaid taxes or something else may be used.

The study [Shestoperov, Schetin, 2007] has shown that in 2006 an average share of the shadow turnover of small enterprises was 38.3% against 44.6% in 2002, the reduction was basically due to reduction of shadow sales, i.e. direct concealment (from 20.6 up to 14.9%), but the share of

the second major form, "cashing", remained unchanged (23.9% and 23.3%). Shadow proceeds in 2006 were used as follows:

- Payment of salary "into the pocket" – 69% of enterprises;
- Bribes – 48% against 57% in 2002;
- Shadow payments to suppliers – up to 52% of enterprises against 46% in 2002;
- Shadow lease payments – 25–28%;
- Payments for criminal "front" – 18–21%.

On the average enterprises spent 15–17% of all shadow proceeds for bribing (not used by everybody), kept in the form of profit up to 19–20%.

Now, in view of the facts and data, think what life a Russian businessman has. It is, at least, abnormal and must generate cynicism and mistrust to those who lives differently. And mistrust to business, in the others.

Why has it happened? I think, each one of us has his own concept. But nevertheless, most of us, probably, understand that this is a result of terrible shocks suffered by Russia in the XX century. Whatever good intentions leaders of the Communist revolutions were guided, all of them were convinced that the end justified the means. Their main fault before the descendants is not even the genocide against their own people, but the corruption of souls, indoctrination of the thought that it was possible to say one thing, to think another one, and to do something else. That one must speak of solidarity, and think only of himself. That responsibility is not encouraged, but punished. That you will not achieve much, if you comply with the law, etc. The fear brought up in three generations, is still alive.

Then perestroika began and many believed that one can squeeze out a slave from himself at once, as tooth-paste from the tube. And someone was sure that he had been filled with a new content for a long time. Then there was disappointment aggravated by the economic crisis, market reforms which became a serious test for the majority, sharp stratification of the society by well-being and ownership, permanent default by the state, corruption among officials, non-operation of justice and law enforcement agencies; this has fully undermined trust to people and public institutions. By the way, the above racket scheme has been developed recently.

I am not going to investigate who is guilty here. I am convinced in one thing: it was really indispensable to escape from the planned communism trap, but no one knew then and knows now how to make it painless or even with much smaller losses. The only thing that should not have been done is, probably, the monetary privatization through loans-for-shares auctions. Now it becomes clear when the gravity and duration of the population majority's negative reaction to this transaction has become obvious. But we should consider efforts of some today's representatives of the power who, clearly with some interest, regularly raise turmoil against the rich.

However, we have to acknowledge that influence of the entire set of circumstances on the present state of morals, on degradation of the social capital was extremely destructive. Our cultural backwardness, that was quite obvious in pre-revolutionary Russia, has aggravated after the Soviet takeover and during market reforms. Development of capitalism, private ownership could not help awakening the desire to become rich, the growth of crime and corruption, and this helped strengthen the legal nihilism and social cynicism.

We are still to evaluate results of the last period when unexpected flow of oil money allowed to resolve a number of the rooted problems, but then it has become an obvious reason of revising the ownership, nationalization of the economy and slowdown of vital reforms, especially in the social sector. This is why the level of trust indicators did not grow during this period.

What we said above referred mostly to the top level of culture: concepts and statements which are more mobile. At that level, we may state that the situation is bad, definitely complicating

modernization. But is it possible that at a deeper level, at the level of national culture values, the picture is different?

Comparing universal values: three international projects

We pointed out that special systems of values can be considered the tool for identifying and self-identifying communities with cultural differences, and for preserving the cultural identity. However, all of us are people having similar needs, restrictions and motives of actions so there should be a similarity in the different cultures values, and distinctions will frequently mean different preferences of the same values. If this is right, cultures could be compared as we have compared trust levels. Also, cultures and values influenced by changes of the natural and social and economic environment vary, although slowly. And looking at the changes of values, to some extent we could judge on the development of the society, and its readiness for necessary changes, including modernization. This results in a natural desire of the researchers to construct a system of universal values to identify the place of each civilization, and each culture.

Three of the world most popular projects of the universal values research should be mentioned: G. Hofstead, R. Ingharta and S. Schwarz. Hofstead distinguishes cultures by their position on following scales: 1) collectivism – individualism; 2) low or high level of avoiding uncertainty: high level – low tolerance to risks, trend to high trust and meeting rules; 3) distance of power (big distance means pre-disposition to authoritarianism, acceptability of suppression of dissent by force; small distance of authority is linked with respect to personality, equal rights, legitimacy of authority rather than force; 4) masculinity – femininity: the first pole is preference of material benefits, authorities, ambitions, achievability, independence; the second pole is preference of interdependence, servicing each other.

Measurements under Hofstead's method have shown high positive correlation of individualism with a level of well-being, freedom of actions, but negative correlation with the rate of economic growth. Negative correlations with a level of well-being were shown by the big distance of power and the high level of avoiding uncertainty. Measurements in Russia made in three studies on the basis of Hofstead's concept (Hofstead, Globe, Latovy) in coordinates: *individualism – collectivism* and *distance of power*, were as follows: individualism – 50–40% on a 100-score scale (Hofstead, Latovy) and strong collectivism (Globe), high distance of authority both in Globe and Hofstead's studies that was expectable due to high collectivism, but average value (40%) in Latovy's study [Lebedeva, Tatarko, 2007, p. 27–36]. So, the interpretation is quite complicated.

R. Inghart initiated the World Values Survey which we used above. The two basic scales, which he uses for measurements are *survival – self-expression* and *traditionalism* (including, religiousness) – *rationalism* (secularism). It is important that Inghart assumes variability of values due to trends of economic development and political institutions. The growth of the economy of survival values, the material benefits preference is replaced with growing desire for self-expression (achievability) and, hence, to non-material values. I would add that such changes of values should be expected during the transition from industrial to innovative economy, but under condition of low social stratification, because a significant gap in the material well-being generates an excessive conflict between the trend of solvent groups to self-expression and poor groups - to survival, and a low level of trust.

Inghart's measurements in Russia referred to early 1990. Then we were at the extreme values of survival rate combined with high rationalism. At that time there was a strong crisis situation, and the end of the communist regime. Russia showed its clear difference from European countries in preferring economic well-being to ecological values, but at the *authoritarianism – liberalism* scale, it was between Denmark and Sweden [Lebedeva, Tatarko, 2007, p. 68].

The most doubtful in Inghart's concept is a too fast change of values. He explains it with two

hypotheses: lack and socialization. The lack hypothesis says that people add value to those needs which are less met due to the lack of means for this purpose. The idea is clear, but generally speaking, the situation is natural for instrumental values which are subject to changes more: by nature, they are close to the economic category of price. But we put terminal values in the foundation of culture.

The hypothesis of socialization is explained as follows. Man has known values since childhood. If a change of social and economic conditions objectively pushes him to change the system of values, due to the lack hypothesis, knowing a new system of values is performed by the following generation that enters the adult life in 10–15 years rather than the adult generation which witnessed the change. Its socialization will be accompanied by knowing new values.

S. Schwarz's concept emphasizes three key problems of each society and, therefore, three axes of coordinates. The first problem is relations between the person and the group. Poles of the axis are *pertaining* and *autonomy*. This pair is similar to the relation *collectivism – individualism*. Pertaining to collectivism can be correlated with *conservatism* or *traditionalism*.

Schwarz's measurement peculiarities are dividing autonomy into two kinds – *intellectual*, suggesting creativity, inquisitiveness, width of views, and *affective*, which is desire for pleasures, enjoyment of life. This is similar to *hedonism*. Therefore, secondly, we do not get an axis of coordinates, but unipolar valuable orientations, approaching one pole does not mean distancing from the other.

The second problem is providing for socially acceptable behavior. The first option is *equality* suggesting network relations between equal individuals where everyone is responsible to behave respecting interests of the others, to observe obligations, to show tolerance and solidarity. The other way is *hierarchy* where socially acceptable behavior is provided for by submission or domination and roles and statuses allocation. Equality requires that conflicts be legally regulated, hierarchy requires that submission to the superior's will, to the authority. Let us compare the pair with Hofstede's distance of power.

The third problem is individual's attitude to natural and social environment. Schwarz calls the polar values *harmony* (everything is good in the world, admire it, but do not change it) and *skill*. Directly, it can be understood as value of skill, high qualification, talent, but in a wider meaning, it is preference of self-expression, success, achievability. On this axis, passivity can be compared with activity. Self-expression is opposed to rest, nirvana, as in Hinduism, perfection by comprehension, idleness (Duos «u wei») [China, p. 42], avoiding uncertainty by Hofstede rather than Inglehart's survival.

Schwarz reviews the list of civilizations similar this report. Preferences of values characteristic of them are shown in Table 15.

Table 15. Valuable preferences of the regions with peculiar cultures (correlations in measurements according to Schwarz): positive correlation is (+), negative correlation is (–)

Region	Autonomy (+) Pertaining (–)	Equality (+) Hierarchy (–)	Skill (+) Harmony (–)
Western Europe	+0.37	+0.54	+0.38
Anglo-Saxon states	0.00	–0.07	–0.38
Confucius cultures	–0.16	–0.44	–0.30
South Africa	–0.24	–0.16	–0.29
South Asia	–0.21	–0.33	–0.04
Eastern Europe	+0.23	+0.09	+0.35
Latin America	+0.11	+0.18	+0.03

Source: [Lebedeva, Tatarko, 2007, p. 45].

It is possible to say that there are few surprises, except for one, serious divergences between Western Europe and the Anglo-Saxon states. Schwarz's supporters are quick to deny the common opinion that Western Europe and Anglo-Saxon states cultures are close, even to stress distinctions between them. Then do not forget to stress their value system similarity with South Africa and South Asia, which is ridiculous. In Anglo-Saxon states, harmony is appreciated as in Eastern Asia, but in Western Europe, it is opposite. At the same time, it is well-known, for example, that being active, entrepreneurial; professional is quite appreciated in the US, while harmony is more in words. Therefore, we need to understand whether these are incorrect common concepts or errors of methodology.

In Table 16, the same values are measured differently: on a 7-score scale (0–7), scores are calculated under a special procedure based on answers related to 57 values list. Here, the value pairs polarity is not stressed as in Table 15. We see, that here harmony and skills in Western Europe and the English-speaking countries have a quite close scoring (4.57 and 3.91; 3.93 and 4.01 accordingly).

Table 16. Average cultural values according to Schwarz in six regions of the world, scores:

Region and number of countries	Harmony	Pertaining (conservative)	Hierarchy	Skill	Affective autonomy	Intellectual autonomy	Equality
Western Europe (14)	4.57	3.34	1.90	3.93	3.74	4.86	5.13
English-speaking countries (7)	3.91	3.66	2.26	4.01	3.64	4.38	4.94
Confucius cultures	4.05	4.02	2.85	4.07	3.09	4.09	4.49
Sub-Saharan Africa (5)	3.75	4.17	2.71	4.20	3.04	4.20	4.52
East Europe (12)	4.49	4.00	2.31	3.85	3.01	4.29	4.63
Latin America (6)	4.25	3.85	2.24	4.00	3.00	4.40	4.91

Value trends in modern Russia

I have characterized the above projects of research of values to give an idea what are the terms used today to discuss the subject. Note that this is a universal system of values which would allow to draw international comparisons. And without them we cannot fully identify national peculiarities. The issue what of the three approaches to choose or the fourth one to offer, is something separate, because the issue is not closed.

However, for us it is more important that according to Schwarz's method we can compare trends of value measurements in Russia. In 2003, working on the Report for the VI International HSE Conference, I found Lebedeva's research on value measurements according to Schwarz's method and referred to it [Yasin, 2003a, p. 57-58]. In 2005 The Liberal Mission Fund under my initiative provided financing to the book quoted above, and to the next round of the research: we thought that a 6 year term may allow to see changes in the Russians' system of values. Earlier, in 1992 Schwarz and his colleagues mentioned Russia: St.-Petersburg, along with Eastern Europe, was included into the study. But data was scarce, so we did not use the data on Russia received in 1992 as a full-scale round. The results are shown in Table 17 which have data good for the review.

Table 17. Average values (according to Schwarz) in the countries of Western and Eastern Europe (in 1999 and 2005) for teachers and students, scores*

Values	Teachers				Students			
	Western Europe	Eastern Europe	Russia		Western Europe	Eastern Europe	Russia	
			1999	2005			1999	2005
Pertaining (collectivism)	3.51	4.15	4.38	4.54	3.32	3.83	3.71	3.88
Hierarchy	1.28	2.19	3.05	3.28	2.01	2.23	3.10	3.17
Harmony	4.30	4.24	4.28	4.41	4.05	4.11	3.69	3.59
Equality	5.35	4.74	4.93	4.79	5.21	4.63	4.27	4.40
Intellectual autonomy	4.60	4.15	4.05	4.25	4.61	4.23	4.65	4.37
Affective autonomy	3.76	3.13	2.95	3.80	4.23	3.78	3.98	4.02
Skill	3.98	3.84	3.98	4.19	4.27	4.22	4.43	4.54

* Scoring (the maximum score is 7), calculated according to questionnaires data on 57 values grouped into seven blocks.

Source: [Lebedeva, Tatarko, p. 130].

Schwarz's technique suggests studies of two groups of respondents - teachers as supporters of conservative values, and students as supporters of the modernist style. The segregation is obviously conditional: the objection is that right after becoming teachers students will turn into conservatives. But let's remember Hefstede's hypothesis of "socialization" according to which people become supporters of values acquired in youth. My observations favor this hypothesis. But now I'd like to point out that my attitude to the conclusions provided below is quite prudent, and I recommend this to the reader. Still I dare state them: in social sciences every link to the reality matters.

So, what conclusions can be made based on Table 17 data. First, teachers show expected increase of conservative values (pertaining, hierarchy, harmony) when going from the West on the East (now we take data on Russia of 1999). This is especially obvious on hierarchy (order) data. Also, from the West to the East, the influence of intellectual and affective autonomy which can be compared with individualism and hedonism goes down. But equality and skill were evaluated by Russian teachers higher than in Eastern Europe. Our students, predictably, appeared to be more liberal than teachers, but were more conservative than their western colleagues in their propensity to hierarchy. Accordingly, they equality and harmony scores were the least. But it is important to stress, Russian youth got the highest scores for intellectual autonomy and skill (leaving behind Western Europe) – the values which characterize potential, desire for success and perfection.

These are very important qualities in the country where radical market reforms had been completed and scale modernization was on the agenda.

Now, let's look on the 2005 data. To understand them better, we draw another diagram on Fig. 3 where teachers and students are shown as one group, and Switzerland and China data is provided for comparison. We see, that based on hierarchy and collectivism values Russia moved towards China, although propensity to equality increased too: interviewees did not perceive these values as polar. Harmony suffered losses and skill value grew: a move towards achievability and to the detriment of nature and humanity. But lower scores of intellectual autonomy and higher scores of affective autonomy are especially alarming, from creativity to pleasures, which obviously evidences a reduction of the development potential. Thus, based on the three values (hierarchy, collectivism, intellectual autonomy), we identified a move back; the growing desire to enjoy life rather than express oneself does not testify to positive trends either. The only encouraging

progress was skills, both teachers, and students left behind Western Europe, without mentioning Eastern Europe.

These are my general conclusions based on these and other data.

First, **the system of values in Russia is quite close to the European system**, but it is more conservative, traditional, order and hierarchy oriented, and less oriented to rights and personal freedoms. This is proved by facts which increases trust to the applied research methods.

Secondly, despite the values were slow-moving in 1990, **we observe significant shifts towards modernization values** (intellectual autonomy and skills), especially with youth scoring these values higher than in Western Europe.

Thirdly, the 2000-2005 development results are not consistent: intellectual autonomy and skills changed differently. Growing hedonism rather than creative abilities development weakened, blocked activity and energy.

Fourthly, there was a step back in major areas (hierarchy, pertaining), which is obviously due to growing pressure of the State, suppression of independent initiatives. Cultural prerequisites of modernization deteriorated.

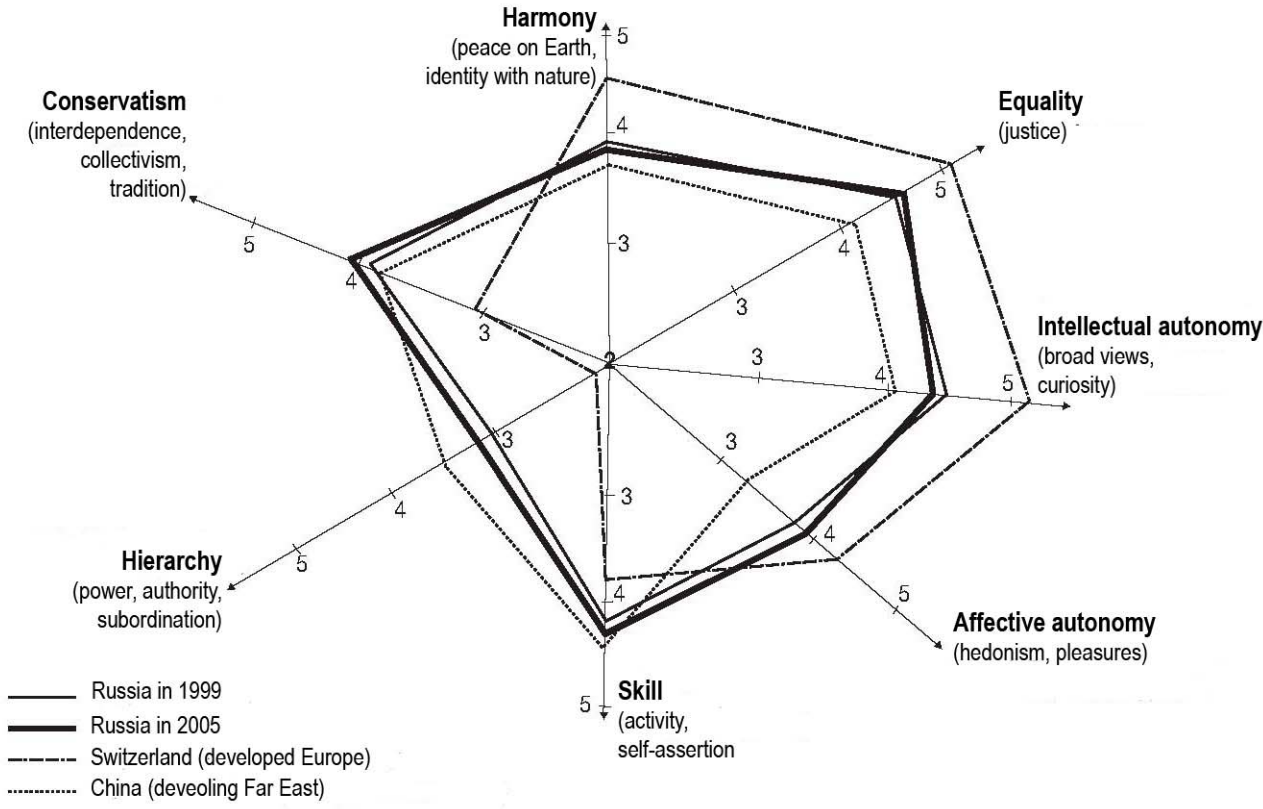


Fig 3. Shifts in the value system of Russians in 1999-2005.

3.4. Measures of trust

To sum up, here are the basic conclusions.

First conclusion: the country needs modernization and is objectively ready to it. The essence of modernization is transition to innovative economy.

Second conclusion: significant institutional and cultural changes are required for transition to innovative economy. Oil, gas, or scale investments will not resolve the problem. Only institutions and culture will.

Third conclusion: the condition of institutions and culture is not favorable. Because of them, we can say that the Russian society is not ready to modernization, to innovative economy. It is eaten by trust crisis and social cynicism. This is not just a result of the communist heritage and the complicated market reforms, but also of the recent period.

Fourth conclusion: we need trust measures to change the social climate, to increase the civil activity, to give an impulse to a new wave of changes which would be supported by the majority of the population.

Now I should have started describing the trust measures I offer. I will not do this. Because this is a subject of a separate report and not even one. But I have already written my program of actions, and it is published [Yasin, 2006b], and actually, I do not have much to add. Also, I expect that new ideas will be presented at our next conference. And finally, I think today, it is not new ideas that matter, but the new policy.

However, I'll present some ideas.

First, if you compare us with other BRICs countries, **we are ready to start the transition to innovative economy like no one else.** Having in mind what I said above, this thesis needs to be explained. The thing is that we, lagging behind on many parameters from our competitors, have approached the line closer than the others. Brazil is next to us, but at it still has reserves for extensive industrial development. At the meeting with Pr. Jao Ferras in Tokyo, I asked him what the main problem in Brazil was. He answered: Creating new jobs. Not innovations, but jobs. We are moving towards a shortage of the workforce that threatens to reduce the GDP if we fail to materially increase productivity. China and India grow quickly, implementing their industrialization and borrowing advanced technologies. Unlike us, they have taken speed in modernization because our growth is grounded on the expensive feedstock produced in our country. They will also have difficult changes related to transformation of institutions and culture, they will be much more difficult than ours because these are the countries where majority of the population continues living in an archaic way. We are an urban country with educated population. Even the demographic crisis can be positive for us: it gives us the only way – the transition to innovative economy. If we fail to consciously transform institutions and culture according to its requirements, we experience another economic and social crisis which will force us to do it. China and India are still far enough from this severe need.

The second idea is that we should agree with the **need of large investments including public, in transformation of institutions,** to increase the trust level. Up to now, by investments we meant capital investments into industrial facilities, or at least, into the infrastructure. The idea of investment into institutional changes, into reforms, I think, is not accepted by the society yet.

I'll just name some of the objects of such investments.

1. *The Pension reform.* If we wish to move to accumulative pension system, and it is absolutely necessary in a postindustrial society with settled population, we should invest material funds so that introduction of the accumulative system has not damaged living pensioners. E. Gaidar has presented certain ideas on this subject,

including the transformation of the Stabilization fund or its part into pension accumulation of future pensioners. To this end, funds received from the new privatization program can be used. I would add payments of currently working younger citizens from their incomes to accumulative pension accounts as suggested by A.Kudrin in May 2004 linked with the soft scheme of pension age increase [Nezavisimaya Gazeta, March 16, 2007].

2. *Reforms of education and health.* Large investments are required here to achieve set goals, rather than to put a tick in the column on planned actions delivery. I have shortly spoke of education above. Ideas of the public health reform acceleration are evaluated in the Report of HSE [Russian Health Service, 2006].
3. *Investments in the market of affordable homes,* are necessary to make mortgage and other loans for home purchases affordable not only for rich families, but also for those that have just appeared and could not make adequate savings. These investments are primarily for overcoming the gap between the beginning of loan issue and the time-frame of their mass return. But these are also investments into development of industrial construction base and the construction industry, in training the relevant staff. Otherwise, loans to the population will increase the demand, which is already big, without increasing supply. Also, this requires strict measures on establishing competitive terms in the housing market, on breaking corruption links between local authorities and selected companies-monopolies. And this problem will not be solved without real development of local self-regulation and local civil institutions that suggest a real influence of the population on elections and local taxation [Yasin, 2006a]. One thing clings to another.
4. *Growth of pensions and wages of state employees.* These costs can not be considered investments – this is a common opinion. I believe that, here and now these charges can become investments into institutions under certain conditions. First, let me remind you that the fund or decil ratio (average income of 10% of the richest to average income of 10% of the poorest) in early 2007 was 15.3 times against 14.9 times one year earlier. In 2000 it was 14.5 times. Social stratification keeps growing, and it is one of the factors of a low trust to public institutions. However, in Brazil this parameter is much bigger, and the trust level is much higher, but in our situation the acceptable gap should not exceed 10-12 times.

Furthermore, today the fixed income level, i.e. paid by the State, is in fact similar to that of the Soviet time, based on the basket of goods and services acquired for current use. Long use items are still sometimes affordable, but homes even through loans), gas, heat and power at acceptable price, payments to the pension accumulation fund, medical insurance is already not. Monetization of privileges covered a very short list of privileges for pensioners and caused an explosion that stopped all reforms. How can they be implemented if relevant allocations are not scheduled for the pension reform, for the public health service reform, where the medical insurance, mandatory (public) and additional, is the key element, for the housing reform which would experience insuperable difficulties if even half, or two thirds of the population do not have a sufficient income to get the mortgage loan. Thus, increase of pensions and salaries with due account of all additional family expenditures and exceeding them to ensure a quiet transition is simply a necessary addition to direct investments into the reforms. And do not say that there is no money for these purposes or that this would cause inflation. For this purpose, there is financial planning which should identify priorities of all expenditures and timelines of allocation [Yasin, 2003b, p. 64-66].

And the final point. Desirable changes in institutions and culture are impossible without democratization. Moreover, it is their organic part and a condition of increasing the trust.

Everyone agrees that Spain achieved a great success in the institutions and values transformation. And what did it do to achieve it? – the often ask. Only two things: liberal economic reforms and democracy. And one more thing: King Juan Carlos ordered the Army to return to the barracks when they tried start a military coup d'état. He is not the first in the Spanish history, but last one. And it has become a new word in the national culture.

References

- S. Avdasheva, A. Shastutko.* Advocating Competition: Subject Matter and Areas of Activities. M.: TEIS, 2006. [in Russian]
- G. Almond, S. Verba.* Civic Culture and Stability of Democracy // Polis. 1992. No. 4. [in Russian]
- E. Vodopianova.* Intellectual Security // Russia's and European Union's Answers to Challenges of the XXI Century / Institute of Europe. P. 2. M., 2006. [in Russian]
- V. Golikova, T. Dolgopiatova, B. Kuznetsov, Yu. Simachev* Demand for Law in the Corporate Governance: Empiric Evidence: Scientific report of Moscow Social Scientific Foundation. 2003. No. 148. [in Russian]
- Civic Society. World Experience and Russia's Issues. M.: IMEMO; Editorial URSS, 1998. [in Russian]
- V. Zinchenko.* Psychology of Trust. Samara, 2001. [in Russian]
- I. Imamutdinov, D. Medovnikov, S. Rozmirovich.* Elephants on the Meadow // Expert. 2007. No. 1—2. [in Russian]
- Science Indicators: collection of works. M.: GU HSE, 2006. [in Russian]
- Science Indicators: collection of works. M.: GU HSE, 2007. [in Russian]
- China: Guide Book / Damian Harper. The National Geographic Travel. [in Russian]
- D. Cola.* Political Sociology. M.: Ves Mir, 2001. [in Russian]
- J. Cohen, L. Arago.* Civic Society and Political Theory. M.: Ves Mir, 2003. [in Russian]
- Culture Matters. Moscow School of Political Studies, 2002. [in Russian]
- N. Lebedeva.* Introduction into Ethnic and Cross-Cultural Psychology. Klyuchi Publishing House, 1999. [in Russian]
- N. Lebedeva, A. Tatarko.* Values of Culture and Development of Society. M.: GU HSE: Liberal Mission Fund, 2007. [in Russian]
- Levada-Center.* Issues of society: Results of Studies, October 2006. M., 2006. [in Russian]
- Lee Kuan.* Singapore History: Getting from the Third to the First World. M.: MGIMO, 2005. [in Russian]
- E. Maimas.* Theoretical Issues of Social & Economic System Modeling // EMM. 1979. V. 15. No. 4. [in Russian]
- E. Meletinsky.* Selected Article Memoirs. M., 1998. [in Russian]
- Education in the RF: Articles. M.: GU HSE, 2005. [in Russian]
- Public Chamber of the RF. Report on the Condition of Civic Society in the RF. M., 2007. [in Russian]
- R. Patnem.* Making Democracy Work. Civic Traditions in Modern Italy / Transl. into Russian; Moscow School of Political Studies. M.: Ad Marginem, 1996.
- Political science. Guide Book. SPb.: Peter, 2006. [in Russian]
- Russian MediCare: How to Overcome Crisis. M.: GU HSE, 2006. [in Russian]
- R. Florida.* Creative Class: People that Change the Future. M., 2005 (Classics-XXI). [in Russian]

- O. Shestoperov, O. Schetinina* Assessment of the Black Market Share in Small Business and Related Factors: [manuscript] National Institute of System Studies of Entrepreneurial Issues, 2007. [in Russian]
- A. Yanov*. How many civilization there are on the Earth? // *Russia in Global Affairs*. 2006. No. 5. [in Russian]
- E. Yasin*. Economy Modernization and Values System: Report to IV International Conference “Modernization of the Economy of Russia: Social Aspect. M.: GU HSE, 2003[a]. [in Russian]
- E. Yasin*. Non-market Sector. Structural Reform and Economic Growth. M.: Liberal Mission Fund, 2003[b]. [in Russian]
- E. Yasin*. Political Economy of Communal Reform. Liberal Mission Fund Studies. M., 2006. [in Russian]
- E. Yasin*. Will Democracy Live in Russia. M.: New Publishers, 2006[b]. [in Russian]
- A.H. Amsden*. Nationality of Ownership in Developing Countries: Who Should Crowd Out Whom in Imperfect Markets? Report of JET-RO Symposium «Rise of the Next Giants?: Anatomy of BRICs». Tokyo, Dec. 2006.
- J. Coleman*. Social Capital in the Creation of Human Capital // *American Journal of Sociology* 1988. Vol. 94. P. 95—121.
- J.C. Ferraz, D. Kupfer, F. Serrano*. Macro Micro Interactions: Economic and Institutional Changes in Brazil Industry // *Oxford Development Studies*. 1999. Vol. 27. No. 3. P. 279—304.
- J.C. Ferraz, D. Kupfer, M. Iootty, S. Rovira, M. Tavares*. A Long and Winding Road: Brazil’s (Slow) Trajectory towards Becoming a World Industrial Power: Report of JETRO Symposium Rise of the Next Giants?: Anatomy of BRICs. Tokyo, Dec. 2006.
- L.E. Harrison*. Who Prospers? How Cultural Values Shape Economic and Political Success. N.Y.: Basic, 1992.
- D. Kupfer, F. Rocha*. Productividad y heterogeneidad estructural en la industria brasileña, in maio Ginoliled // *Heterogeneidad estructural, asimetrías tecnológicas y crecimiento en América Latina*. ECLAC/ EABD, 2005.
- A. Maddison*. *The World Economy. A Millennial Perspective*. Paris: OECD, 2001.
- W. Martin, B. Dimaranan, E. Ianchovichina*. Dancing with Giants. Adjusting to the Export Growth of China and India: Report of JETRO Symposium «Rise of the Next Giants?: Anatomy of BRICs». Tokyo, Dec. 2006.
- M. Patipandla*. Economic Reforms and Structural Changes: India: Report of JETRO Symposium «Rise of the Next Giants?: Anatomy of BRICs». Tokyo, Dec. 2006.
- D. Rodric*. What’s So Special about China’s Exports: [mimeo]. Harvard University, 2006.
- Zhang Jun*. Making Growth Happen in Post-reform China: What Have We Known?: Report of JETRO Symposium «Rise of the Next Giants?: Anatomy of BRICs», Tokyo, Dec. 2006.
- D. Wilson, R. Purushoham*. Dreaming with BRICs: The Path to 2050. Global Economics Paper / Goldman Sachs. 2003. Oct. 1.