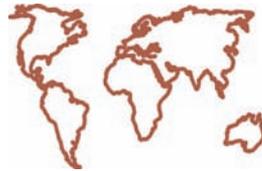


B. N. Kuzyk, Yu. V. Yakovets

# CIVILIZATIONS:

## Theory, History, Dialogue and the Future

In two volumes



### Volume II Future of Civilizations and Geocivilizational Measurements

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for Economic  
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**Volume II**  
**Future of Civilizations**  
**and Geocivilizational**  
**Measurements**

Part four

**Future of Civilizations**

Part five

**Geocivilizational Measurements**

Supplements

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## **PART IV**

# **FUTURE OF CIVILIZATIONS**

**14. Outlines of Civilizations of the  
21<sup>st</sup> Century**

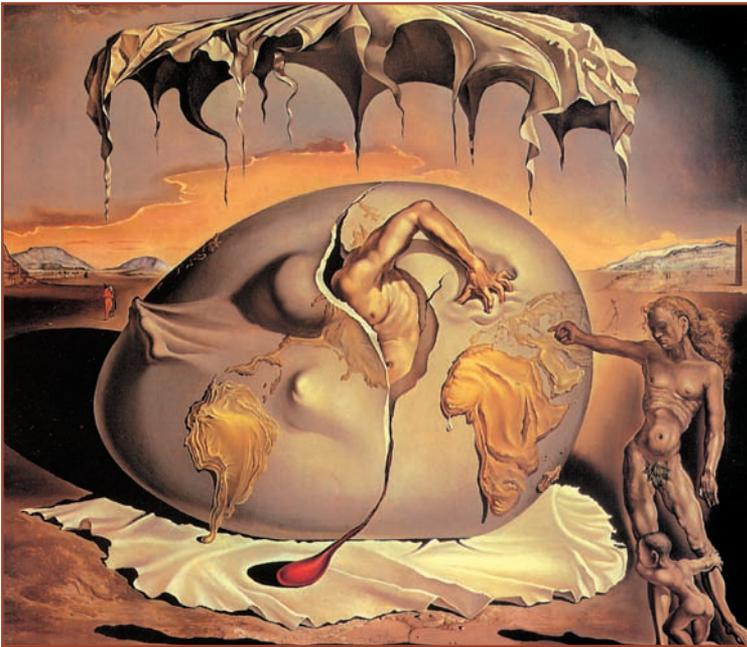
**15. Global Civilization: New  
Challenges**

**16. Russia in Geocivilizational Space  
of the 21<sup>st</sup> Century**

**T**heoretical basis and historical researches on dynamics and interaction of civilizations enable to find out regularities and tendencies of their movement and on the ground of this to define a shape of their future, of development and further interaction of global, world and local civilizations in the 21<sup>st</sup> century inside of the third historical super cycle which is beginning in our face. One may suppose that if the development of the human race will go according the detected rhythm, then there will be three related world civilizations and two or three generations of local civilizations. It is, however, nothing but conception that will be verified by the forthcoming development. The shape of the civilizational dynamics for the first half of the 21<sup>st</sup> century looks more definitely. We have luck to be the witnesses and participants of the great historical turning point, alteration of the historical super cycles and world civilizations. A modern typhoon of changes transforms the world face and our ideas of it. Of course, to live at such a time is not easy. So much it is important to realize all the profoundness, to understand the historical roots and the substance of these transformations to imagine probable scenarios of the future of civilizations.

## Chapter 14

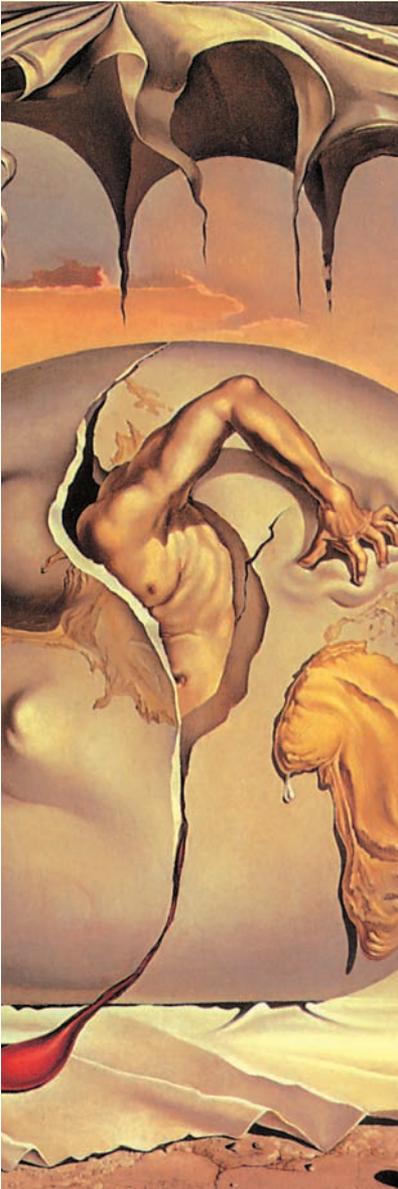
# OUTLINES OF CIVILIZATIONS IN THE 21<sup>st</sup> CENTURY



**A**t the end of the 20<sup>th</sup> – the beginning of the 21<sup>st</sup> c. the dynamics of civilizations – global, world and local – is on the sharp turn. The new fifth generation of local civilizations is being born in the throes. The industrial society is being painfully transformed into the post-industrial. A long transition from the second to the third super cycle is developing. The sensual socio-cultural order, which dominated throughout five centuries, is being changed for the integral one. It is important to make out the outlines of the forming system of civilizational relations of the present century through the dense tangled net of chaotic changes. It is difficult, next to impossible, but necessary for working out of a long-term strategy and for correct understanding of your own place in the rapidly changing world.

---

## 14.1. At the Outset of a New Historical Super Cycle



**T**he most remarkable feature of the present-day period in the world history is the completion of the life cycle of the industrial world civilization that prevailed during more than two centuries and the formation of a new post-industrial civilization, whose essence and major specifics are just being formed growing out of contradictory tendencies of the past and the present.

This historical rift changes the look of humankind. The whole scheme of society undergoes deep transformation, all «floors» of a civilizational «pyramid». Globalization develops vigorously giving rise to new contradictions. Understanding of deep processes and contradictions of the transformation of the industrial society into post-industrial, separation of obsolescent, doomed to become the historical past from the nascent, still weak, but having the outlooks for the prevalence in future is a necessary precondition for the working out of a founded strategy for development of each state, each civilization and humankind in general.

*The germination of the post-industrial society.* The intellectuals – scientists, futurologists – were the first who felt underground pushes of the nascent new world civilization. A famous philosopher and sociologist, **Pitirim Sorokin**, proved convincingly in his four volume book «Social and Cultural Dynamics» [183] published in 1937–1941 and in the book «Major Tendencies of Our Time» [181] published in 1964 the inevitability of the approach of a new, integral, socio-cultural system coming to replace the prevailing, but decaying sensual system. US sociologist **Daniel Bell** wrote a report about the post-industrial society in 1962 and in 1967 published a fundamental work «The Coming of Post-Industrial Society. A Venture in Social Forecasting» [12], which appeared in Russia in 1999. Already then he had come to the conclusion that the transition to the post-industrial society is inevitable: «The thesis put forward in this book is that we'll witness the emergence of what I call the post-industrial society in the next thirty-fifty years... The post-industrial society as a social form will be the main feature of the social structures of the United States, Japan, the Soviet Union and countries of Western Europe». [12, p. CLXVI].

In a wider context, the problems pertaining to the formation of a new civilization were addressed in the book of **Alvin Toffler**, a US futurologist, «The Third Wave» published in the USA in 1980 and in Russia in 1999. Toffler assessed the formation of a new civilization as the «third wave» in the history of humankind after the Neolithic revolution that laid the beginning of the agricultural civilization and the industrial revolution that was at the cradle of the industrial civilization. He wrote: «The new civilization is being born in our lives... The beginning of this new civilization is the only and having the strongest blasting force fact of time when we live. This is the central event, a key to understanding of time following the present. This phenomenon is as deep as the first wave of changes caused by mastering of agriculture 10 thousand years ago or the striking second wave associated with the industrial revolution. We are the children of the next transformation – the third wave... Humankind is in for drastic changes. It faces the deepest social overturn and creative reorganization of all the time... A lot in this emerging civilization conflicts with the old traditional industrial civilization. It is at the same time a highly technological and an anti-industrial civilization» [184, p. 31, 32, 33].

In Russia, the concept of transition to a new civilization was formulated in 1992 in the report «Formation of the Post-industrial

Civilization» at the International Scientific Conference dedicated to a centenary celebration of **N.D. Kondratieff** (a discussion «Kondratieff Cycles and the Future: Looking into the 21<sup>st</sup> Century»). The major conclusion of this report was as follows: «The major features of the post-industrial civilization that will become prevailing and reach its rise in the 21<sup>st</sup> century are taking shape more and more definitely already now... The prime feature of the post-industrial civilization will become the revival of high culture, the priority of spiritual reproduction» [246, p. 7, 9].

These ideas were developed in the treatise «At the Outset of a New Civilization» published in 1993 in Russian, and then in English. On the base of the studied in this paper facts a conclusion was made: «Concurrently with the decline of the industrial civilization and in confrontation with it a new, post-industrial is being born, the heyday of which is likely to fall to the middle of the 21<sup>st</sup> century. The shoots of the new are being formed now, which we will have to learn to discern and support. This is the man competent and skilful, active and creative. This is a humanized reproduction based on the priority of the consumer sector, on high and resource-conscious production technologies. This is a new system of economic, social and political relations... This is the primacy of spiritual world, flourishing of individual abilities and talents, rising to new heights of national and international culture» [ibid, p. 130–136].

The concept of the post-industrial world civilization, its outlines, stages of formation and development is dwelt upon in more detail and more profoundly in the treatises «History of Civilizations» [242] and «The Past and the Future of Civilizations» [276].

***The framework and stages of the transitional period.*** A change of civilizational cycles, and, moreover, historical super cycles is a long, painful process. The grinding break-up of the prevailing, obsolete, but accustomed forms of social and economic life supported by force of inertia, social institutes, customary way of life, accustomed scientific paradigms, esthetical views and ethical standards and at the same time — formation of a new, unaccustomed way of life, yet weak at this stage, is taking place. A transitional period from old to new world civilizations lasts for decades, passing through a number of stages.

Few doubt that humankind has entered the transitional period. Three major parameters of the historical dynamics indicate it: speed of changes (what seemed inviolable, established by years, decades, and even centuries, is radically changing all of a sudden during sev-

eral months, and even days); their depth (shifts are observed nearly in all «floors» of the civilizational «pyramid»); geographical scale (it is difficult to name a country that is not involved in this boiling swirl of changes). All accustomed, established is changing vigorously and painfully under conditions of an acute crisis, which has left no sides of society's life uninvolved, a future civilization is being born in the throes.

Obviously, these changes overstepped the framework of current fluctuations and medium-term cycles that regularly shake countries and continents. But how the essence and scale of historical changes could be assessed? To the beginning of what kinds of historical cycles could the present transitional period be attributed? Three answers to this question are possible.

**1. A change of long-term historical cycles occurs within framework of the industrial civilization** – the beginning of the next stage in its dynamics. The leading technological, economic, socio-political systems, prevailing scientific, cultural and ideological paradigms change each other. In this case, the foundations of the industrial society remain unshakable, only the forms and mechanisms of their implementation change. In the epicenter, the transitional period takes about a decade and lays the foundations of the up wave for several decades ahead; this process begins later on the periphery and may be extended over a longer period.

The fact of the current change of orders is indicated by many identified tendencies in all spheres of social life. But first, the depth of the overturn has exceeded the scale usual for long-term cycles: the fundamentals of the industrial civilization that were established by centuries turned out to be involved. Second, despite expectations the duration of the transitional period has exceeded considerably the usual one for the change of semi-century cycles. Two decades have already elapsed, and the «earthquake shocks» and «lava flow» do not stop. It is obvious that the matter concerns the historical cycles of a larger scale.

**2. From the last quarter of the 20<sup>th</sup> c. humankind entered the transitional period to the post-industrial civilization;** a change of super long (civilizational) cycles has begun. From this point of view both the depth and duration of the overturn become clear. The very foundations of the industrial society, machine system of production, increasing concentration and centralization of economic and political power, turn of man into a part, a small screw of huge technological, economic and socio-political systems – all this is passing.

The foundations of a new, post-industrial civilization are being born. In such case, the last phase of the retiring civilization and the first phase of coming coincide in time and determine the essence of the transitional period and its approximate semi-century duration that is equal to the duration of a long-term historical cycle. The contents, duration and outcome of a civilizational crisis are predetermined thereby. The transitional period is characterized by a mixed nature of technologies, economy, socio-political system, and also a series of resonating crises intensifying each other in all spheres of society. The nascent orders of a new society (technological, economic and ecological) have the features of both the former and new civilizations, are transitional, which determines their insufficient efficiency, difficulties of the formation in the environment that is incompatible with new trends in many ways. Only at the second historical step (a long-term cycle) the post-industrial civilization will be built on its own base.

With such approach the framework of the transitional period will take about a half of the century in the epicenter (in the vanguard countries). But on the periphery — near and distant — this process will last considerably longer. Throughout the historical period the post-industrial society that is going through a number of stages (semi-century cycles) in a number of countries will co-exist and interact with the industrial and even pre-industrial society in other countries that lags from the leaders of the historical progress.

**3. There are also grounds for speaking about the beginning of the transitional period to the *third historical super cycle* that will embrace the triad of civilizations of the third millennium of our era following each other.** Such transitional period will take approximately a century, bringing major social upheavals and transformation of society to its very depth. **Alvin Toffler** warned about the complexity and dangers of today's transitional period: «The transitional period will be marked by major social upheavals, powerful shifts in economy, technological failures and catastrophes, political instability, violence, wars and a threat of wars... No man of sense can foresee assuredly the outcome of these processes. The clash between two civilizations involves a grave danger in it» [194, p. 558].

With such approach the framework of the transitional period expands. It embraces two phases of the post-industrial civilization (about a century, i.e. approximately two long-term cycles).

Obviously, the structure of this period will turn out to be more complicated, it will include several periods of downs and ups, long-term cycles changing each other and crises when they change.

## **14.2. The Essence of the Post-industrial Civilization**

**The models of the post-industrial society.** The absolute majority of scientists agree that humankind has entered the transitional period from industrial to the post-industrial society at the turn of the century. But what will be the contents, major distinguishing features of the world civilization, which is being born before our eyes? All kinds of answers are given to this question. Let's mark two most prevalent and mutually exclusive concepts of the essence of the post-industrial society – either information-cybernetic or humanistically noospheric.

**The model of information-cybernetic society.** A new information revolution that evolved in the developed countries in the second half of the 20<sup>th</sup> c. found its expression in the spread of computers, information systems, telecommunications, a vigorous growth of the information sector of economy, creation of the World Wide Web – Internet, strengthening the influence of the information flows on the conscious of people, their demands and behavior. The concepts of *information-based civilization*, complete informatization of society became widespread as well as replacement of human vital systems with man-made and cybernetic and transformation of man into a biorobot in prospect. «As we approach the end of the twentieth century, it becomes increasingly obvious that we enter the era of information. It means not only the development of communications that existed before, but appearance of new *principles* of social and technological organization, which may be compared with great transformations of the recent centuries» [12, p. CXX].

The information revolution really transforms all spheres of society:

➡ information products and services occupy a key role in economy, in the number of the employed and GDP of developed countries, in the process of globalization;

➡ productivity of labor of scientists goes up as well as speed and scale of the transfer of new knowledge and information about events at any point of the world; achievements of culture become plan-

etwide, distance learning develops; a knowledge-based society is being formed;

➔ the opportunity of the real involvement of people at large in political processes, democratic control over the activity of state institutions and political parties is created.

However, the outburst of information technologies also brings new dangers. A small number of super powerful information TNC has established control over this sector and generate a huge information quasi rent, fill in information channels with the contents imposing western civilizational values worldwide. The danger of the today's model of informatization was noted by **N.N. Moiseyev**. «Information society... really produces revolutionizing influence on society, changing rapidly our life conditions. It renders an enormous influence on the spiritual world of people and is able to reshape the fundamentals of morality. Man has acquired powerful, but an extremely dangerous weapon in it, not less powerful and not less terrible in its consequences than an atomic bomb... Let's imagine that the whole immense information system, which has already been created on our planet and the might of which will increase exponentially with each decade, could once get into the hands of a small group of people pursuing their own mercenary interests... In such situation, a global zombing of the planetary humankind will occur. It will be sophisticated information totalitarianism that is more terrible than any forms of totalitarianism known to humankind, although it will have a "civilizational" nature... It is the end of history as such society is doomed» [136, p. 83,85].

The global information crisis of 2001–2002 demonstrated that the possibilities and outlooks of informatization are strongly exaggerated. It will occupy its worthy place in the future society, but it does not express its major essence. The definition of the post-industrial world civilization as informational means an attempt to lengthen the existence of the industrial society where man has become an appendage to the machine system.

***The concept of humanistically noospheric society.*** The alternative approach to understanding of the essence of the post-industrial society that is being formed before our eyes is proposed by a modern Russian civilizational school that views the post-industrial world civilization as *humanistically noospheric society* where Man, his spiritual world and free creation, the principles of rational co-evolution of nature and society are brought to the forefront. What are the

major features of this new world civilization, which inaugurates the next historical super cycle?

From our viewpoint a major watershed between post-industrial and preceding world civilizations is in the fundamental *change of the position of man in reproduction and society, in their consistent humanization*. In the early industrial and industrial societies formally free man became more and more a part of the huge mechanism created by him – industrial, market and political. From the objective of social development he turned into its means and was included perforce in the logic of events and actions not determined by him, into an appendage, a screw of a powerful soulless machine. In the humanistically post-industrial society it is man, his all-round development, free creation that becomes the supreme, long-run objective of social development, a measure of efficiency of decisions taken and actions undertaken. It is not productive forces and market mechanisms as tools for a growth of profit that come to the forefront, but spiritual sphere – science, education and culture, ethics and religion ensuring an all-round development of man and his adaptation to the changing conditions of life. It implies humanization of technologies, political and economic relations.

The second, inseparably connected with the first distinguishing feature of society follows thence *ensuring rational co-evolution of nature and society, noospherization of civilization*. Without this it is impossible to ensure health and quality of man's life, survival, development and prosperity of biological species Homo sapiens who has reached a hazardous level of influence on the environment.

On these assumptions we believe that the post-industrial civilization going through the phase of formation will be not information-technocratic, but *humanistically noospheric*. And these are not velleities, but an objective necessity: otherwise humankind will not survive.

**Alternative scenarios of the future.** Two possible scenarios of the formation of society of the 21<sup>st</sup> century have been addressed above: formation of the *information-technological* or *humanistically noospheric* world civilization. Scientists and futurologists put forward alternative scenarios for the system of the world in the 21<sup>st</sup> c., which lie deep in the present day tendencies. Let's consider four of such scenarios featuring split civilization; Pax Americana; self-destruction of humankind; dialogue and partnership among civilizations in the ensuring of global development.

**1. The concept of «split civilization»** was advanced by **V.L. Inozemtsev** [70]. The kernel of the concept is the following:

➡ from the last quarter of the 20<sup>th</sup> c. the post-economic revolution evolved in the countries of the West, the formation of the post-industrial society began when creation succeeded labor, commodity production, private property and exploitation remained in the past;

➡ formation of the post-industrial, post-economic society is the monopoly of the West and first of all of the USA and Western Europe; the unipolar world will establish itself;

➡ the countries of the East (including Japan) and Russia are doomed forever to remain at the industrial stage of development; the opportunities of the «catching up» are exhausted;

➡ the solution of the problems of the poorest countries (the «fourth world») is in the renewed colonialism, in the deprivation of sovereignty, administration of the groups of international observers resting on the UN army in the forced implementation of measures of environmental and economic sanitation under support of the post-economic countries.

However, the statements about the «post-economic» society have a nature of new Utopia, and aiming at the split of civilization, unipolar world and «neocolonialism» can only aggravate a threat of a self-destructive clash among civilizations.

**2. The concept of Pax Americana** – the new world empire under the aegis of the USA – is most clearly defined in the book of **Zbigniew Brzezinski** «The Grand Chessboard» [17]. The contents of this concept are reduced to the following:

➡ after disintegration of the Warsaw Pact, Comecon and the USSR the USA became the only and last real world super power, occupying the dominating positions in the military field, in the field of economy, technology and culture;

➡ the purpose of the US policy is to «consolidate its own dominating position, establish a geopolitical structure that would ease inevitable upheavals and tension caused by socio-political changes and concurrently form the geopolitical core of mutual responsibility for the rule of the world without war» [17, p. 254];

Eurasia will become the major field of geopolitical struggle in the 21<sup>st</sup> c.; strengthening the partnership with Western Europe the USA will promote the movement towards the confederate structure of Russia, intensify the influence in the Far East, in South and South-Eastern Asia.

The famous politologist gave details of this scenario determining its objectives:

➡ strengthening of the US-European global partnership, transatlantic alliance between the US and Eurounion;

➡ expansion of the NATO and Eurounion – first due to the accession of the countries of Eastern Europe and the Baltic, and then – Ukraine and Caucasus, finally the admission of Russia to the NATO;

➡ promotion of democracy in the Moslem countries;

➡ transformation of the balance between the USA, Japan and China, establishment of the trans-European multilateral structure of security.

Since tragic events of September 11, 2001 under the guise of combating international terrorism the USA has begun to pursue more actively Brzezinski's doctrine, the line towards the establishment of the unipolar world and a decisive role of the USA in all regions of the world.

However, this tendency can't but cause a response of other countries and civilizations that are aware of their own interests and advocate them. The claims to the world dominance were made not once in the past and failed each time. The concept of Pax Americana is not in line with general historical truth and has no chances for victory.

**3. The concept of the clash among civilizations** is more completely formulated in the treatise of **Samuel Huntington**, US politologist [259]. The root of his position is reduced to the following in a nutshell:

➡ ratio of forces between civilizations changes – the influence of the West is reduced; Asian civilizations build up their economic, political and military might; they are going through a demographic outburst;

➡ growing claims against the West result in more and more clashes with other civilizations, especially the Islamic world and China; on the local level wars are waged by lines of rifts, especially between Islamic and non-Islamic groups, which leads to further escalation of tension;

➡ survival of the West depends on the ability of the USA to accept its civilization as unique, and not universal, unite it and stand up to challenges from the non-western societies. The humankind can avoid the threat of a global war only if the world leaders are able to meet this challenge and to agree to cooperation for the maintenance of a multi-civilizational nature of world policy.

Many tendencies of the formation of the multi-civilizational system of the world and the aggravating threat of the clash among civilizations have been noted correctly by **S. Huntington**. But it should be taken into account that under conditions when many civilizations have nuclear weapons, their clash growing out of local conflicts may instigate the omnivorous fire of a thermonuclear war. Its result will be self-destruction of humankind, «nuclear winter» the scenario of which was worked out by **N.N. Moissejev**, destruction of biosphere or putting it into a state where there won't exist the narrow niche occupied by man.

**4. *The optimistic scenario of the future system of the world based on the dialogue and partnership of civilizations in ensuring a global sustainable development rests on the concept of sustainable development.*** This concept was formulated in the report «Our Common Future» [142] approved at the conference in Rio de Janeiro (1992) and reaffirmed at the summit in Johannesburg (2002). It found its expression in the resolution of the UN General Assembly dated 9.11.2002, the «Global Agenda for Dialogue among Civilizations». This scenario was substantiated in the worked out by the Pitirim Sorokin – Nikolai Kondratieff International Institute and approved at the 4<sup>th</sup> International Kondratieff Conference paper «Concepts of Formation of Multipolar World on the Basis of Dialogue and Partnership of Civilizations» [44, p. 37–51] (see *Supplement 3*).

The basic points of this concept are as follows:

➡ globalization opens new opportunities and at the same time it generates new contradictions and dangers. The necessity of choice between the models of a unipolar, bipolar and multipolar system of the world arises. «The model of a multipolar system of the world in the 21<sup>st</sup> century seems most real and promising. A sustainable model of the multipolar world may be implanted only on the basis of the dialogue and partnership of local civilizations» [ibid, p. 39]. The formation of this model is a complicated, contradictory and lengthy process; it will take several decades;

➡ historical experience endorses this model – several civilizations which entered and dialogue and confrontation existed throughout millennia;

➡ the knot of the problems of the 21<sup>st</sup> century – demographic (crises of overpopulation in one countries and depopulation in others), natural-geographical (threats of depletion of a number of types of natural resources and environmental catastrophes), technological

(a gap in the level of technological development of countries and civilization), economic (an increasing gap between the rich minority and poor minority of the population on the planet), geopolitical (threats of political instability, asymmetric wars, international terrorism, clash among civilizations), socio-cultural (tendencies towards devaluation of civilizational and ethical values, a loss of cultural diversity) may be solved only on the basis of the multipolar world, dialogue and partnership of civilizations;

➡ mechanism of the implementation of the multi-polar system of the world includes a speedup of the formation of civil society expressing and protecting the interests of its power and legal institutes, enhancement of the role and responsibility of the UN and other state and public movements and non-governmental organizations for the development of mankind;

➡ the implementation of the optimistic scenario must be realized, but it meets a lot of obstacles on its way, which are difficult to surmount and first of all the resistance of powerful self-serving TNC and imperial ambitions of the USA under weak and disunited political forces interested in the implementation of this scenario.

Which scenario of the future of humankind will be implemented in the 21<sup>st</sup> century will become clear only in the middle of the century. But it is already obvious that the fate of humankind depends on a clear awareness of their thinking part of possible scenarios, their activity and concentration of efforts on the optimal scenario allowing eliminating a fatal end in the history and keeping the planet and society for future generations.

### **14.3. Transformation of the Structure of Civilizations**

The formation of the new world civilization, and more so — the next historical super cycle — is connected with a deep transformation of the structure of society, all its elements, all «floors» of the civilizational «pyramid». This transformation began at the end of the 20<sup>th</sup> c.; it will embrace a considerable part of the present century, although it will be happening with a various depth and at various speed in various countries and local civilizations. It is difficult, and even impossible now to visualize in detail what the world will look like by the middle and moreover by the end of the 21<sup>st</sup> century. But

it is possible to outline the transformation of society on the assumption that the future springs up from the past and the present; it is important to distinguish the germs of such future, and not to invent the desirable. The foresight of the future is the same object of study as cognition of the historical past, restoration of the times, which passed long ago.

Let's consider what changes are possible in the major elements of the structure of civilization — in man, family and population, technological base and a system of economic relations, in social stratification, state-political and spiritual spheres (in science, culture, education, ethics and ideology). Our studies will be based on the optimistic scenario of the future development of civilizations.

### **14.3.1. Demographic Polarization of the 21<sup>st</sup> Century**

The essence of changes that will happen on the Earth in this millennium will depend first of all on demographic tendencies, changes in the number and structure of population, in the fate of the family and man himself — his demands, abilities, knowledge and skills.

***The outlooks of the dynamics of population.*** In the second half of the 20<sup>th</sup> c., the dynamics of population on the Earth was characterized by a record demographic outburst for all its history: while population grew within two centuries (1750–1950) by 2.2 times (1.73 bln. people), for the recent half a century it grew by 2.4 times (3.57 bln. people). It is important to mention that the population of poorer countries and civilizations grew most rapidly.

According to the UN's medium variant forecast the population increase rates will considerably slowdown in the first half of the 21<sup>st</sup> century — from 1.35% of the average annual increase in 1995–2000 up to 0.33% in 2045–2050 [272, p. 38]. Nevertheless, the number of people on the Earth will increase from 6.1 to 8.9 bln. people — nearly one and a half time (according to the upper variant — up to 10.6 bln., according to low — up to 7.4 bln.). It is expected that in the second half of the 21<sup>st</sup> c. the total number of the Earth residents will stabilize on the level of 10–11 bln. people, and the tendency towards the decline in the population number might prevail in the next centuries. A demographic transition substantiated by Prof. **S.P. Kapitsa** will be realized thereby [77]. The forecast of the dynamics of population by the regions of the world is presented in *fig. 14.1* (according to the

UN's medium variant forecast). Population of rich countries will not practically increase, and it will grow 2.5 times in poor countries.

The tendencies forecasted for the first half of the 21<sup>st</sup> century will have negative consequences. The aging of population will occur: the mean age will grow from 26.8 in 200 to 37.8 in 2050 (by 41%), a share of population aged 0–24 will drop from 47.7% to 33.7%, and in the age of 60 years and above will increase from 10% to 21.7%. A demographic load on the able-bodied population will increase.

It is unreal and dangerous to solve demographic problems through the decline in the population number of the Earth up to 1 bln. people (the concept of the «Golden Billion»). An attempt to implement such concept may instigate military conflicts. Humankind is able to feed a growing number of population based on profiting from the achievements of a scientific-technological overturn, a considerable increase in labor efficiency. Experience of China, new industrial countries of Asia and the «green revolution» in India showed that it is real.

In the 21<sup>st</sup> century we have to find the settlement of two types of demographic crises: overpopulation (especially in Africa, Latin America, India and Moslem countries) and depopulation (in Western Europe, Japan, Russia and Ukraine). It will allow bringing closer the tendencies of demographic dynamics in various countries and civilizations.

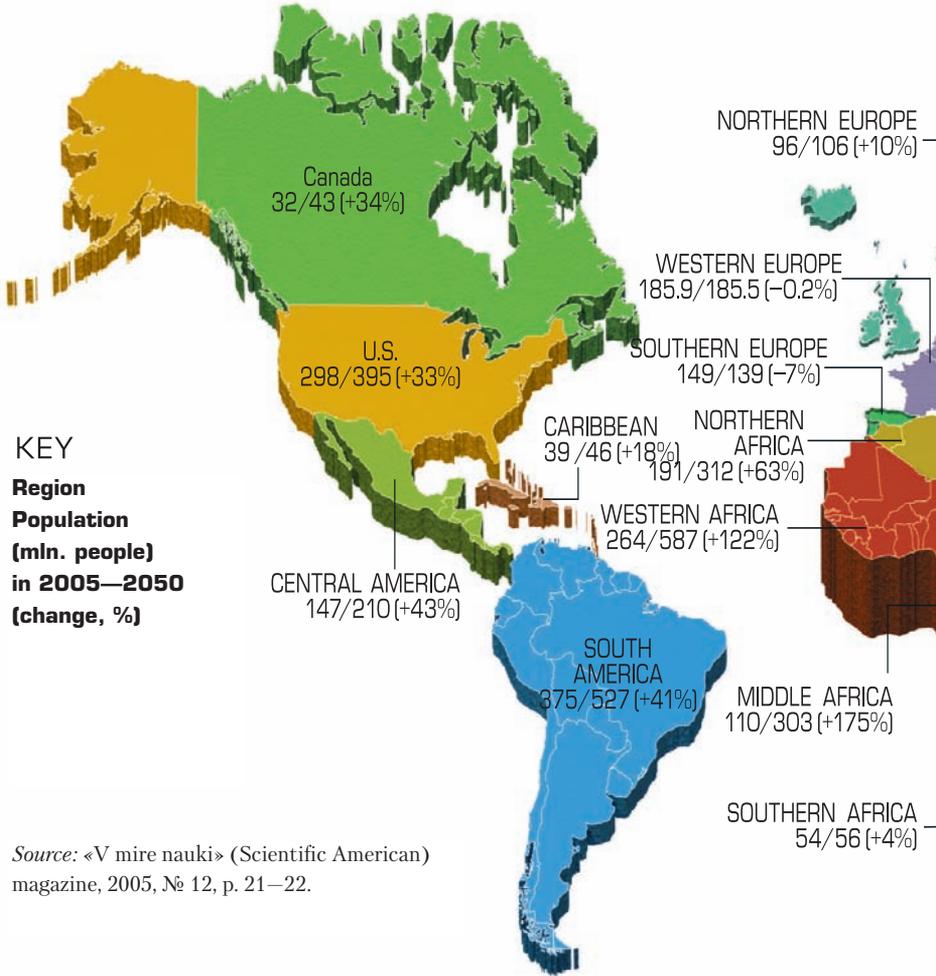
***The fate of family in the post-industrial society.*** In family relations, contradictory tendencies are observed in the period of the formation of the post-industrial society. In a number of developed countries and countries with the transitional economy the role of family continues to decrease as a social institution, the number of extramarital and unisexual relationships, the number of divorces, childless families and families with a small number of children, unparented children increases. In the developing countries a family with many children remains the base of society, however, women have much lower level of education or remain illiterate and are poorly involved in social life.

«Sexual revolution» and decreasing role of family have given rise to forecast that the present form of family in the future will disappear, an era of free sex relations will come and the function of upbringing of children will pass to society. However, these forecasts appear unreal.

In the long term, ***three major functions of family*** will survive, although the mechanism of their implementation will be trans-

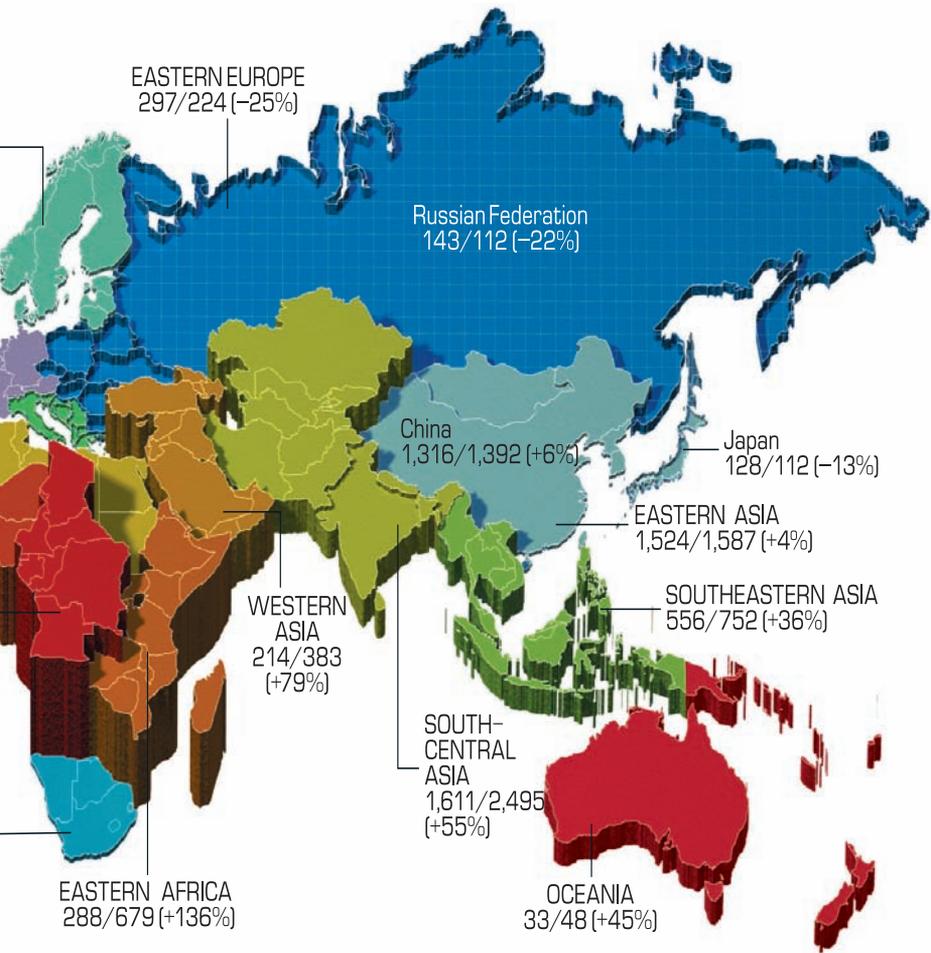
Figure 14.1

**Forecast of the Dynamics of Population Number  
in the World Regions until 2050**



Source: «V mire nauki» (Scientific American) magazine, 2005, № 12, p. 21–22.

formed. *First is the function of reproduction of life, transmission of the biological genotype to next generations.* Families are created to implement the law of continuing posterity supported by millions of years. If this function, this law fails, humanity will disappear from the face of the Earth. Powerful instincts of maternity and paternity are inher-



ent to any person, they are necessary for raising a normal child without a psychological damage. The now intensifying tendency to incomplete families deprives a child of normal childhood, becoming one of the reasons for a growth of infant delinquency and wanton cruelty. Poorly endowed by society, the child revenges. If this ten-

gency persists and if incomplete families and families with few children grow in number in developing countries, it will become a strong obstacle on the path to the revival of humanism, which can't rest on rancor and cruelty.

There are reasons to assume that these negative tendencies that are mainly typical of developed countries in the transitional period will be surmounted to a great extent; that at the stage of maturity of the post-industrial civilization the tendency towards the revival of family as the main social unit will prevail.

*The second, economic, function of the family* increases, especially under difficult conditions of crisis of society, growth of unemployment and struggle for survival. It seems as if a wide involvement of women in production and social life and tendency towards the leadership of women in many spheres counteract it. However, the increase of self-sufficiency and social activity of women does not mean that the instinct of maternity dies, that women refuse to make a family. But the latter is now built on the basis of equality, implies a greater involvement of man in upbringing of children and household-keeping.

*The third function of the family is reproduction of a social genotype*, transmission of knowledge and cultural heritage, upbringing of growing generation and formation of its spiritual world. Personality is moulded in childhood, in family, in a pre-school period. A scope of knowledge and skills a child learns in the first years of life exceeds many times the scope acquired throughout the next period of education. The character is moulded, ethical rules are learnt understanding of good and evil and emotional world develops. Each child tries himself in artistic activity; it is not by accident that children drawings are so ingenuous, fresh and emotional. Communication of children with peers and adults in the kindergarten, in the street replenishes and enriches the inner life of a child; but the foundation is laid in the family, and nothing can replace it. A disintegration of families with children is a social evil which should be if not surmounted, but reduced to minimum by the post-industrial society.

**Evolution of man in future.** There is a widely spread opinion that creation of miniature control devices, their inclusion in the human body, replacement of natural organs with artificial, genetic intervention in the hereditary substance will transform the man into a cyborg – cybernetized organism.

Fortunately, such kind of changes breaking fundamentally man's biosocial genotype are unreal. The evolution of Homo sapiens,

as well as of any other kind of animate nature, rests on the regularities of genetics (heredity, variability and selection), a gradual accumulation of evolutionary changes occurs in the genotype.

At the same time it may be anticipated that under the implementation of the positive scenario of dynamics of civilization in the 21<sup>st</sup> century qualitative changes will occur in man:

➡ the circle of his *demands* will expand under a priority development and dominance of spiritual demands; the convergence of the level and structure of demands will happen in various countries and civilizations;

➡ *the abilities* of man to satisfy his demands based on creative labor will grow essentially as a result of the overcoming of illiteracy, functioning of the system of permanent education and distant learning;

➡ a discharge of man from heavy physical and monotonous labor, making it creative will enhance the *stimuli* to labor, at the same time the character of working hours norm-setting will change: people will get more free time for various and engrossing activities, free communication and sports;

➡ human's *health* will strengthen considerably based on the profiting from the achievements made by the genetic engineering, achievements in the overcoming of traditional and new dangerous illnesses, improvement of labor conditions and household activities of billions of people.

However, a negative scenario — degradation and depopulation of Homo sapiens species as a result of a demographic catastrophe — should not be eliminated.

### **14.3.2. Alternatives of Ecological Future**

In the first half of the 21<sup>st</sup> century humankind has to choose between the formation of a noosphere mechanism of rational co-evolution of society and nature — and an increasing threat of a global environmental catastrophe.

**Ecological threats of the 21<sup>st</sup> century.** The ecological factor played the prime role at all stages of the formation and development of world and local civilizations. In the 21<sup>st</sup> century this factor has assumed the nature of a global ecological catastrophe associated with two tendencies: depletion of a number of available natural resources, necessary for the survival of man, and fast pollution of the environment, especially in the densely populated regions.

By the end of the 21<sup>st</sup> c. prospected, available and cost-effective oil reserves, a number of non-ferrous metals, and then natural gas will come to an end. A shortage of sweet water, fertile lands and forests becomes increasingly noticeable in many regions of the world. The forestation area reduces annually by 0.3% in the world (102 sq. km), while in Latin America – by 0.9%, in Africa – by 0.8%. It is necessary to promptly find replacements of critical types of natural raw materials so that to meet growing demands mankind.

A growth of environmental pollution is associated both with the increase of a demographic load on it and a wide employment of technologies connected with hazardous emissions, toxic and radioactive pollution of atmosphere, sources of water and soil.

At the turn of the third millennium humankind found itself in the state of a deep-seated and protracted environmental crisis. Its main causes are a demographic explosion, sharply increasing density of population and hence the load on the natural environment; a general depletion of the potential of the industrial technological mode of production based on the highest degree of involvement of natural resources in production; impoverishment of pollution of the biosphere opportunities for natural self-reproduction; creation of weapons of mass destruction which are able to destroy not only humankind, but a considerable part of biosphere; the prevalence of a consumer attitude to nature of the ruling and business elite, TNC executives, a predatory consumption of the best resources and pollution of the environment for the sake of profit and super profit (rent); a disunity and weakness of movements for ecology.

In the second half of the 20<sup>th</sup> c. the population density increased 2.4 times. The load on the natural environment, the scope of the employment of natural resources connected with the increase in the consumption of each man and the priority growth of the heavy industry increased considerably. According to the UN's medium forecast the population density growth will make 1.47 in 2000–2050, within the century – 3.5. It's an unprecedented rate for the elapsed periods. The growth of volume of outburst of greenhouse gases will change the climate, which will lead to melting of glaciers, rise of the level of the oceans and flooding of many cities and coastal regions.

This will cause the ultimate overload of the natural environment in the densely populated regions and will make a global ecological catastrophe real. It can be avoided only if mankind will begin to use

resource-saving technologies, achieves stabilization of the overall number of population, reduces consumption of primary resources and emission into the environment. Otherwise, humankind will become degraded or even disappear from the face of the depleted and polluted planet.

**Scenarios of ecological future.** Today's ecological crisis has a complicated structure. In the forecasting of ecological future of humankind it is necessary to take into account all complex structure of the interaction between natural-ecological cycles and crises:

➡ natural-space, hydrological, hydrosopic, climatic and biological;

➡ nature management based, associated with preservation, reproduction and involvement in production of various types of natural resources (mineral-raw material, land, forest, water, fish etc.);

➡ purely ecological, reflecting the level of man's impact on the environment, radiation pollution, violation of natural processes of restoration and functioning of biosphere.

From the second half of the 20<sup>th</sup> c. with the advent and spread of the nuclear and bacteriological weapon, a sharp increase of the scale of production and life activity of a fast growing population a threat to the existence of socium and the biosphere itself became real. It is possible to speak about the beginning of the next whorl in the co-evolution of natural and social systems, a qualitatively new stage in the cyclical dynamics of ecosphere.

**Several possible global scenarios of the ecological future, interaction of natural and social systems on the planet are taking shape.**

*The first, gloomiest one:* putting into action of the accumulated arsenal of weapons of mass destruction will destroy all flesh on the Earth; it will turn into a lifeless planet. There is a destructive potential for that; there are also social preconditions: a growing gap between the enormous majority of the poor and a handful of the rich nations. A clash between local civilizations will cross the whorls of the spiral of biosphere and social evolution. However, the evolution of the non-organic world will continue.

*The second also distressing scenario:* biosphere will remain in a largely transformed, primitive form after the a global ecologic catastrophe, but no man will remain, social systems, every thinking substance will vanish. In the course of further evolution it should not be excluded that they will revive, but in a different variant due to a radically changed natural environment.

*The third best of the worst scenarios:* after the clash of local civilizations humankind will survive, but it will be subject to strong mutations, which might lead to the emergence of a new much more primitive biological species. Social systems thrown several whorls back will begin to climb the historical stair again; the epicenter of civilization will shift to the regions less affected by a devastating clash.

*The fourth scenario* is in the balancing between a destructive and creative variant of noosphere, with the surmounting of constantly arising threats, with a slow implementation of the potential of the post-industrial society and the maintenance of a sandy balance constantly breaking between natural and social systems.

And finally, *the fifth optimistic scenario* permits to hope for the triumph of a constructive variant of noosphere in the 21<sup>st</sup> c., harmonization of relations between society and nature, dynamics of social and natural systems. This will require the awareness from the intellectual, political and economic elite that the sliding to the abyss is ruinous and a conscious selection of the optimal path and its consistent implementation. It is the gist and the purpose of the humanistically noospheric post-industrial civilization. Developing of near (near-Earth), and then «middle» (within the Solar system) cosmic space will begin that will lay the foundation for the next whorls of the spiral in the co-evolution of natural and social systems.

Each of the aforementioned scenarios of not that far future is real, they are not a conceptual fantasy. It is the first time that a challenge of such dimension, a need for a conscious choice of the future has arisen before humankind.

***An arduous path to noosphere.*** A way to prevent a global ecological catastrophe, a way to the rational co-evolution of nature and society was shown by one of the outstanding thinkers of the 20<sup>th</sup> century academician **V.I. Vernadsky** in his theory of transformation of biosphere by thought and labor of humankind into *noosphere* — the sphere of reason. «Humankind taken as a whole becomes a powerful geological force. And it, its thought and labor, faces the issue of *restructuring of biosphere in the interests of a free-thinking humankind as a whole*. This is a new state of biosphere, which we are approaching not noticing that it is “noosphere”... Man consciously and mainly inconspicuously sharply changes chemically the face of the planet — biosphere... Now we are seeing a new geological evolutionary change of biosphere. We are entering the noosphere» [ 28, p. 241, 242].

The theory of noosphere was evolved in the works of one of the outstanding thinkers of the 20<sup>th</sup> century — **N.N. Moissejev**. His contribution is in the inquiry into the regularities and tendencies of the co-evolution of society and nature in the process of formation and development of civilization, in disclosure of the essence of a threatening ecological catastrophe and in determinations of the ways for its prevention. N.N. Moissejev contributed significantly into the solution of this global problem through the development of a «nuclear winter» scenario and having demonstrated to the leaders of nuclear powers to what bottomless abyss they brought their nations and all humankind. «For biological species *Homo sapiens* to be able to keep themselves on the planet so that to maintain and further develop their own civilization, the economic and political order that had been spontaneously formed by the end of the 20<sup>th</sup> century, should be improved through well-directed efforts. I believe that this is a prime task of the planetary civil society being formed now in the implementation of the sustainable development principle proclaimed at the congress in Rio. All other ecological programmes will remain just good intentions without a radical solution of this task» [132, p. 28].

What are the *preconditions and ways for the formation of noosphere*, implementation of the optimistic scenario of eco-future for civilizations?

**1. The key to salvation of society and biosphere is in the hands of intellectuals.** All the depth and consequences of the forthcoming catastrophe, ways and means for its prevention could be realized only through concentration of scientific thought, which can work out the strategy of the movement to a constructive variant of noosphere, to clothe this strategy in the ideal attractive for new generations, for most humankind. This is a hard and long way as it is opposed by the inertia of thinking, force of traditions, mercenary interests of social strata profiting from predatory exploitation of natural. But there is no other way for salvation. Revolution in science, spiritual sphere, working out and dissemination of humanistic noospheric ideals and ethical standards is the starting and decisive precondition for harmonization of dynamics of social and natural systems.

**2. Progressive social forces, social movements, the youth should rally around a new ideal** — only then such ideal has chances to be implemented. The resistance of conservative scientific circles, short-sighted politicians, mercenary monopolies and transnational

corporations, decrepit political parties, fanatic national and religious movements should be surmounted on this path. Society should be restored to health if it wants to survive. The enlightenment, formation of the system permanent ecological education may play a significant role here.

**3. Rationalization of the structure of needs**, their optimization based on real opportunities for their satisfaction should become the first step. A wasteful consumption model spread worldwide is pernicious, leads to a fast depletion of resources on the planet. A fast increase in the population number in the developing countries threatens the future not in a lesser degree. Along with the efficient model of consumption, bridging the gap between the rich and poor countries and elimination of arms race it is necessary to pass on globally to resource-saving technologies, because without this it is impossible to stop the sliding down to the ecological catastrophe.

**4. A technological breakthrough is the tramline of the implementation of the global ecological strategy.** Being aware that humankind may change natural conditions of its existence and development in a very small degree, and the tendencies of demographic dynamics change very slowly, a technological breakthrough, transition to the noospheric post-industrial technological mode of production is the major resource of the implementation of the global ecological program subjected to reason, will and labor of man. Historical experience proves it: beginning from the Mesolithic humankind found itself in the state of a global ecological crisis not once, and each time a transition to a new level of technological development permitted to overcome the crisis opening space for speeding up of the economic growth and social development. The logic of evolution of industrial technologies put humankind on the brink of a global ecological catastrophe. It can't be prevented without the assimilation of fundamentally new nature-friendly technologies with other social purposes.

**5. In the face of the imminent catastrophe it is necessary to unite all healthy forces of the planet** with the purpose of elaboration and implementation of global ecological programmes and mechanisms for their implementation, using the UN other international organizations. It's the only way to surmount national and religious extremism, a wave of local wars and conflicts, stop humankind before the point of no return and slowly, but surely to reverse the trajectory of the evolution of social system towards a constructive variant of noosphere. The vanguard core of sustainable development rendering

an increasingly large influence on the world order and having sufficient forces and means will be forming, so that resting on the acknowledged international mechanisms, they could stop the threat of extremist and fanatic forces, separate maniacs to throw humankind into the turmoil of self-destructive war. And the main point is to support and develop positive elements of noospheric dynamics resting on the growing awareness by new generations of a reality of the threat of destruction of nature and socium and to unite the society for harmonic development.

### **14.3.3. Coming Technological Overturns**

In the 21<sup>st</sup> century, a radical overturn will take place in the scientific-technological base of society. This overturn is equal to the industrial revolution of the end of the 18<sup>th</sup> – beginning of the 19<sup>th</sup> c. by its nature, depth, socio-economic and ecological effect. It may be called the *post-industrial scientific-technological revolution*, forming a material-technological base to the next world civilization, third historical super cycle.

***Formation of the post-industrial technological mode of production.*** In the first half of the 21<sup>st</sup> century in vanguard countries, a new post-industrial technological mode of production will be formed and spread globally. It will replace industrial and changing fundamentally material-technological conditions of production and life of people.

The life cycle of the post-industrial technological mode of production being formed is equal to the length of the post-industrial world civilization. It is likely that this transitional period to a new technological order will take about a half of the century in the epicenter, and then will be followed by a semi-century period of its spread broadwise and depthward. And the maturity phase, the peak of the established mode of production will follow thereafter and the phase of its gradual senescence, technological crisis, brewing up the preconditions for the formation of the germs of the next technological advance will follow next.

The elapsed decades of the transitional period enable to formulate some major features of the post-industrial mode of production that are fundamentally different from the industrial mode of production doomed to leave gradually the historical scene.

*The first feature is humanization of equipment* that manifests itself not only in the change of the structure of production (manufacturing

of equipment directly meant for satisfaction of human needs increases), but in the very nature of its employment reducing to minimum a hard manual and monotonous labor directly involved in the technological process, thus making labor more creative.

*The second is increasing the research intensity in production*, priority of high technological engineering systems that embody the latest achievements of scientific thought. The matter in question is the formation of a *knowledge-based society*.

The increase in knowledge, its diffusion through the system of continuous education, a skilful technological employment become a decisive factor of socio-economic development determining the competitiveness of products, level of wealth and quality of life of population in various countries and civilizations.

*The third is miniaturization of equipment*, deconcentration of production programmed for a flexible response to a fast-changing demand for products. It permits to expand considerably the field of action of small and medium businesses, to saturate each family life with electronic devices, and enhance the efficiency of labor in personal and private household.

*The fourth is ecologization of production*, complex use of natural raw materials, their replacement with synthetic (plastics and synthetic resins, composites, ceramics etc.), application of nonwaste and low waste technologies reducing hazardous emissions, increasingly rigid ecological standards, transition to hydrogen power engineering. A material-technological base is being created for the implementation of the underlying principles of noosphere, ecological sanitation of the planet.

*The fifth is a combination of localization and globalization in internalization of production*. Irrational territorial division of labor associated with specialization of regions and countries on fuel and raw materials extraction and its large scale carriages gives place to local technological systems that ensure a complex processing of raw materials at the point of their extraction, enhancement of the self-sufficiency of regions and mutual exchange of finished goods. Integration ties intensify, but assume another nature oriented to a great extent at satisfaction of a diversified consumer demand. The mobility of population increases, which is facilitated by expansion of scale of transport and its cheapening. Information networks reach each man regardless of his place of residence, make him a citizen of the world, participant or observer of the events happening at any point of the globe.

Globalization of the scientific-technological overturn increases many times the speed of acquisition and dissemination of knowledge, intensifies the interrelationship of the contents and renewal ratio of fixed capital in various corners of the planet, forms a single technological network of planetary reproduction, establishes the preconditions for a new leap in the improvement of efficiency of reproduction, labor capacity.

***Change in the forms of organization of production and improvement of its efficiency.*** The post-industrial scientific-technological revolution changes the tendencies in the forms of organization of production, ways of the employment of scientific-technological achievements. The machine gave rise to the factory supporting the system of machines; the factory became a symbol of the industrial production. From century to century, phase to phase of the industrial technological mode of production, factories and plants became more and more powerful, concentrated thousands and tens of thousands of workers, grouped in large industrial centers, absorbing manpower from the adjacent villages and causing an increasingly large damage to the environment.

Electronization of production and everyday life, information revolution, miniaturization of equipment and deconcentration of production gave rise to the tendency of deurbanization, resettlement of people. Small business, especially in the manufacturing industry and in the sphere of services turns out to be more efficient, flexibly responding to changes. The giants of the industry survive, but their number reduces. The opportunity to make production maximum closer to man appears, thus creating a network of small businesses in small towns, supporting farms scattered countrywide. The environmental pressures decrease, pressures on large cities ease.

The nature of labor division is changing. The enhancement of complexity of labor, a frequent change of generations of equipment and alteration of labor make unprofitable a shop division of labor: multifunctional workers, engineers, technicians, designers, managers and scientists who are able to adopt fast to changing conditions are necessary. A part-based specialization, highly tailored mono-product production also loses sense in many ways; it prevails only in mining industry for the time being. A one-sided territorial division of labor is removed, mono-product dedication of regions, which results in the unreasonable growth of carriages. Intensification of complexity in raw material processing, diversification of production, improvement of self-sufficiency of regions in combination with deconcentration of

production and deurbanization will change the look of national economies, contribute to evening of the level in their development, to elimination of deformity of extreme specialization, to reducing the carriages of raw materials and fuel. This will become the beginning of a new super long-term organizational-production cycle.

The overturn in the technological base of society will open the path to the *improvement in the efficiency of production* as it was the case after the industrial revolution. This process will develop unevenly, wave-like. In the transitional period, especially at its beginning, under conditions of a general system crisis a fall in the growth rates will be observed, and in separate periods and some countries negative values will be reached. High growth rates of efficiency are anticipated in the phase of formation of the post-industrial technological mode of production that will promote the relaxation of social and ecological tension. In the maturity phase, the efficiency growth rates will stabilize, and in the senescence phase they will begin dropping again reflecting the approaching of the next general technological crisis (partial crises will be observed during a change of technological orders and prevailing generations of equipment). Apparently, the greatest profit of such technological overturn will be received by its leaders, this process will run slowly and contradictorily on the periphery.

***Contradictions of the scientific-technological overturn.*** It is necessary to warn against a technological euphoria that usually accompanies the beginning of each technological overturn and is replaced with a bitter disappointment thereafter. *Unevenness and contradictoriness of a scientific-technological advance* persists. It carries threats to the future of humankind, fates of civilization.

The formation of base directions of a scientific-technological overturn will require huge means and personnel of the highest efficiency, great scholarship of the majority of population. Only highly developed civilizations representing a small part of the population on the planet have such conditions. Most of developing and post-socialist countries do not have necessary resources for the implementation of the latest directions of such technological overturn. Considerable efforts of the UNO and other international organizations will be necessary so that to arrange the flows of real technological aid for transformation of advanced technologies to the developing countries and civilizations, improvement of the level of education of their population. It is in the interests of the developed countries themselves if they want to avoid a global social explosion.

It should be taken into account that the latest scientific discoveries and base innovations may be used both for the benefit and to the detriment of man. The latest means of mass annihilation are created; new generations of nuclear weapons are developed and conventional weapons become more precise and destructive. A powerful intellectual potential of the military-industrial complex is still targeted at the creation of more sophisticated means of attack and defense. The nuclear weapon overruns worldwide, a threat that it will fall into the hands of terrorists who will draw a line at nothing becomes increasingly real.

Despite all precautionary measures the genetic engineering does not close out the chance of the creation of such organisms that after their release will cause irreversible changes in the animate nature, change the heredity of man. Abuses of latest discoveries in the biotechnology, psychoactivity of people turning man into an obedient tool of the ill will are possible.

One should not overestimate the threats of the technological overturn, but they should not be ignored, either. There is no absolute good and absolute evil. It is necessary to assess soberly the contradictoriness of the technological advance and take reasonable steps to restrict its negative consequences and use it for the benefit of man and mankind. There is no other more powerful instrument in the transformation of the world.

#### **14.3.4. Globalization and Transformation of Economy**

The formation of the post-industrial society is inaugurated by radical changes in economy. It leaves the national boundaries and assumes a global nature, becoming humanized and ecologized, changes its structure and system of relations.

***The essence and tendencies of globalization of economy.*** A rapidly developing globalization that has embraced the whole globe like oecumenical fire has become the most vivid feature of changes and a focus of contradictions at the turn of centuries and millennia.

The matter in question is not only the next stage of international trade developed for centuries and strengthening of economic integration of various countries and civilizations typical of the second half of the 20<sup>th</sup> c. A qualitatively new look of global economy is being formed. Its characteristic features are:

➡ *scientific-technological* and ecological foundations of reproduction have assumed a global nature, they can't function normally within national boundaries. Modern high-tech systems (for instance, a satellite network, Internet and telecommunications) run through all world economy, become a technological skeleton of globalization. The problems of supporting economy with major types of natural resources, restriction of hazardous environmental pollution may be solved only by joint efforts of countries and civilizations;

➡ the *institutional base of global economy is being formed in the form of the network of powerful transnational corporations (TNC)*, which in actual fact are of supranational nature, although they are registered in separate countries (mostly – in the USA) and control more than a half of the world GDP, are governed by their own interests and are getting out of control of states and civil society;

➡ *integration assumes new features*, leads to the establishment of supranational unions within civilizations and cross-civilizational unions that form a reproductive-technological cores of the global economy. The European Union within the western European civilization (and now of Eastern as well) may be adduced as an advanced example;

➡ *global institutes are being established in the field of circulation* – the World Trade Organization (WTO), International Monetary Fund (IMF), World Bank and other international organizations that assume a part of functions with respect to the regulation of global economy, and also of international financial centers; the UNESCO role grows in the interstate regulation of the sphere of spiritual reproduction, UNEP (a UNO program on protection of the environment) – in the sphere of international ecological relations;

➡ *synchronization of cyclical dynamics of economy intensifies in the global scale*, as well as pulsation of the rhythms of changing phases of global economic crises in reproduction and in the financial and credit sphere.

Globalization will be evolving during a number of decades and will have been completed by the end of the 21<sup>st</sup> century with the creation of single global economy while national and civilizational economies persist as components inseparably connected with each other and developing in a common rhythm.

**Contradictions and future of globalization.** Globalization processes are contradictory by their nature and socio-economic effect:

➡ the neo-liberal model of globalization prevailing now is carried out in the interests of developed countries and TNC, it intensifies *polarization* of the rich and poor countries and civilizations.

➡ the major agents of globalization – TNC and world financial centers – have got out of control of national states, interstate unions and global civil society.

As a result of globalization economic stratification and migration intensify, contradictions between various social sections aggravate, the international movement of «anti-globalists» gathers head.

Globalization has objective foundations, it is impossible to stop it and, moreover, to turn back the clock. The matter in question should be *a change in the model of globalization* so that its fruit could be distributed more equally between various civilizations, countries, and social strata.

***Two extreme scenarios of dynamics of globalization*** and its effect are possible in the first half of the 21<sup>st</sup> century.

The *negative scenario* implies that a gap between the rich and poor countries will be growing as a result of a self-will of TNC to consume predatorily available reserves of natural resources and environmental pollution will increase with an inevitable approach of a global ecological catastrophe. This will aggravate the contradictions in the split world that might lead to a global clash between civilizations. This scenario is quite real if now prevailing tendencies and today's neo-liberal model of globalization persist.

However, the reverse, positive scenario of globalization is not less real as a result of transition to another humanistically noospheric model oriented at a global sustainable development. Let's look at preconditions and conditions for the implementation of such scenario.

***Formation of the post-industrial economy.*** The first half of the 21<sup>st</sup> c. will be characterized by the formation of the post-industrial economic mode of production going to replace industrial.

What are the major *characteristic features of this mode of production?*

1. It can't be called either developed capitalism or developed socialism. *This is a new integral economic system* inheriting the elements of industrial economy being adopted to the radical changes in life conditions of society and assuming qualitatively new features.

Capitalism as an economic system based on exploitation of hired labor by capital and unrestrained pursuit of profit has no

future. Moreover, the system prevailing now in the developed countries has already lost many features of classical capitalism.

It is unlikely that a social revolution will take place in the developed countries in the near century, which will bring to power a new class and change the nature of economic relations. Another tendency is more probable that is a gradual evolution of existing relations, which will be assuming more and more features of the post-industrial economic mode of production transforming into a new quality, into an *integral* system of economic relations,

**2.** In the period of the formation of the post-industrial world civilization *shifts* connected with the gradual humanization, mastering of new technological orders occur in *the structure of economy*. It will provide for comparatively high and sustainable speed of economic development (*fig. 14.2*).

In future, shifts in the reproductive and branch structure may be anticipated towards the sectors and industries manufacturing goods and services for personal consumption (while a share of food falls and a share of household appliances and services grows). Intellectual product, mechanical-engineering and scientific-technological complexes will quickly develop due to a decrease in the share of intermediate product and fuel and raw material industries, and also state consumption and military-industrial complex.

**3.** *Radical changes are taking shape in property relations*, in distribution of public wealth between various groups of population.

**First**, a share of personal property of citizens, and first of all — housing and household effects (household appliances, transport vehicles, furniture etc.) will considerably increase. This tendency took shape in the developed countries in the second half of the 20<sup>th</sup> c.

**Second**, *the relation of petty and big private property will change*, which is determined by a priority development of small business, first of all in the sphere of services and in manufacturing of consumer goods. However, big property will retain considerable positions in the industries with a high level of socialization of production, especially in fuel-raw materials industries and transport. Transnational corporations will operate under control of society and under strong international and national anti-monopoly laws.

**Third**, *a share of state property will decrease* due to demilitarization of economy and privatization. This will limit the opportunities for the state-bureaucratic machinery to interfere in the reproduction processes. However, liquidation of state-owned property should not be expected: it will be retained for the prime natural resources, cer-

tain transport vehicles, strategic objects, manufacturing of weapons, major objects of public health and education, national cultural heritage etc.

**Fourth**, an increase in share of collective property may be expected — due to increase in the number of enterprises owned by collectives of workers and cooperativization of the funds of petty commodity producers.

**Fifth**, the development of integration ties will find its expression in the growth of a share of international property (both interstate and owned by international concerns, consortiums, joint ventures etc.). However, the internationalization rates of property are likely to be more moderate than at the end of the 20<sup>th</sup> c.

Consequently, tendencies of dynamics of property relations are different in many ways in the period of the formation of the post-industrial civilization from those observed in the industrial society.

Mixed economy will persist and be optimized with respect to new conditions of society's development. A difficult task is to ensure a real control by national and global civil society over activities of monopolies and TNC.

**4. Tendencies of changes** are contradictory *in the sphere of distribution* in the period of the formation of the post-industrial civilization. On the one hand, the leveling in distribution widespread in former socialist countries and the dependency of a part of workers associated therewith will be surmounted. Everybody's income depends on the results of labor activity and entrepreneurial activity, which enhances the motivation mechanism. On the other hand, polarization of income, a gap between the rich and poor sections of population, countries and civilizations grows, a hidden re-distribution of income will increase as a result of expanding scale of operations of shadow economy, corruption. These are the tendencies of the beginning of the transitional period; they will be replaced by the reverse ones in the developed post-industrial society.

**5. Considerable changes occur in the sphere of exchange, in the market relations.** Deformation of the market and restriction of the sphere of its influence connected with the state-socialist and state-monopolist regulation of economy will be surmounted, the opportunities will be limited for a bureaucratic interference in economic interests. With the expansion of the domain of small and medium business and weakening of monopolies an opportunity will be opened for the revival of competition, economic competition between manufacturers and consumers of goods.

Figure 1 4.2

**GDP Growth Rate in the World, Groups of Countries and Russia (data of 1950-2000; forecast scenario of the global innovation breakthrough), %**



Source: [69, p. 119]

The market assumes a global and more differentiated nature, meets specific needs of specific consumers. Does it mean that economy of the post-industrial society is an all-pervading and all-permeating market? **Alvin Toffler**, US futurologist holds the converse opinion: «Humankind was engaged in construction of the world exchange network – market for at least 10 thous. years. In the last 300 years, from the very beginning of the second wave this process has been going on at a furious pace. Civilization of the second wave marketized the world. Today... this process is being completed... The third wave is creating the first “transmarket” civilization in the history... I understand under the word “transmarket” civilization dependent on market, but not stricken any more by the need to build, expand, develop and integrate this structure... Now when the major task of building the market is nearly completed, huge energy directed before at the creation of the world market system may be used for other purposes» [194, p. 458, 463, 464].

A non-market sector of economy ensuring reproduction of human capital, spiritual sphere, prime social services will get priority development.

6. The above-mentioned tendencies of transformation, structure of reproduction and economic relations will require *radical changes in the management of economy*. It will become softer, not breaking

the rules of a market game, not suppressing the independence, freedom of choice for producers and consumers and at the same time more strategic combining interests of the present, past and future generations. The tendency towards democratization of the management directly at an enterprise will intensify, especially connected with the combination all in one: the worker and owner (small business, shareholders — workers of enterprises, collective owners). Economic unions (concerns, consortiums, holdings, trust companies, finance-industrial groups etc.) will be under state and public control as a rule. All this will foster the development of entrepreneurial spirit, innovation, responsibility of everybody for the performance results of the company.

7. The indicators of *efficiency of reproduction* are changing. It is unlikely that the previous records in the rates of economic growth, improvement in the labor efficiency ensured due to the priority growth of the military-industrial complex, growing consumption of power resources and raw materials, depredation of natural resources will be attained and exceeded. Ensuring sustainable development is likely to become the major guidelines, aims of economic policy (with a smaller amplitude of cyclical fluctuations), as well as rationalization of demographic processes, reduction of material and power consumption in production, pollution abatement and improvement of the environment and quality of life, bridging a gap in the level of life of various social strata and regions, surmounting a dangerous gap between the developed and developing countries and civilizations. New guidelines will begin to make their way in the transitional period and become prevailing in the second long-term cycle.

Consequently, all system of economic relations will change radically in the period of the formation of the post-industrial civilization, a turn in a number of radical tendencies observed in economy of the industrial civilization will occur.

### **14.3.5. Transformations in the Socio-political and State-legal Spheres**

Radical changes in people's life, technologies, economic system will inevitably give rise to the changes in all sophisticated system of social relations — in social structure, political life, state-legal sphere, relations between the states of the forming post-industrial society.

***Tendencies of social stratification.*** The industrial civilization was characterized by the tendency towards simplification of a social structure, division of society into social groups (strata). The major classes prevailed — capitalists and hired workers, large political parties. The unification of society was performed in the USSR and other socialist countries, the aim at the surmounting of social differences was set.

However, the tendency of unification contradicted the law of social differentiation, deepened social stratification. In the period of the formation of the post-industrial society, despite the unific impact of globalization the tendency towards deepening of social stratification both inside individual countries and in global scale overpowers.

**Pitirim Sorokin** who had made profound inquiries into social stratification distinguished its major forms (economic, political and professional) and showed that the depth of stratification changes in various phases of long-term and civilizational cycles.

The class structure of society goes through deep changes. *Bourgeoisie* is divided into several social groups with a well-defined difference of interests. The monopolist bourgeoisie resting on the upper crust of bureaucratic machinery, generalship and gang leaders of the underworld became the force opposing a social advance and is interested in militarization of economy, existence of «hot spots». Having economic might in the international scale, this section resists the long-felt changes.

Small commodity producers — farmers, small entrepreneurs and merchants, owners of innovative firms, cafes, restaurants etc. — see the process of revival. A share of small business grows in the gross output and its social force, political weight increases concurrently, political parties struggle for the votes of this stratum during elections. In actual fact, many representatives of «liberal professions», emerging law offices, art salons etc. join it.

The look of the *working class* changes. It is already not the proletariat deprived of property. Skilled workers have own houses, cars and shares. The accumulation of tens of thousands of workers at the giants of the industry is passing. The software developers, operators of automated lines, processing centers, communication systems etc. become major figures in making material benefits and services.

Differentiation involves the considerably increased section of *employees*. A part of them — top managers — make a part of the ruling elite, merge with upper bourgeoisie, become a conservative social force, impede radical reforms or try to use them in own interests.

Another, most numerous part of employees has actually merged with the working class.

The section of the *retired people* who live mainly on pensions, engaged in households or supplementing their pensions by working in the sphere of services or production becomes increasingly considerable.

The ***outlines of the social structure in the 21<sup>st</sup> c.***, which includes several basic social groups and a lot of their variants, are gradually taking shape:

➡ skilled workers in the sphere of reproduction — workers, technicians, programmers, scientists, designers, engineers, teachers and employees;

➡ small and medium entrepreneurs running independent business in the industry, agriculture, construction, transport, in the sphere of services;

➡ pensioners and rentiers living on income generated by their labor in the past or invested in securities;

➡ big entrepreneurs, top section of civil servants, upper crust of the army, political party leaders, «kings» of the underworld — not numerous stratum with considerable economic and political power and resisting democratic transformations.

Among the age-sex groups the youth and leaders of female movement will enjoy a growing influence. Both these groups have their special interests. The youth becomes the major driving force for changes in society, and women being more and more actively involved in reproduction, especially in the information sphere claim the equal status in social and political life.

***Changes in political life.*** In the transitional period, differentiation by nationality and race intensified. The tendency towards the leveling of national distinctions and increasing of the number of mixed marriages was replaced by a wave of nationalism — not only in the field of culture, but in the political field as well. The struggle for the restoration and strengthening of national sovereign states intensified and that is what local national elite is interested in. A number of federative states (USSR, Yugoslavia, Czechoslovakian SSR) disintegrated. It was often accompanied by territorial claims and conflicts, inter-ethnic clashes and wars (Transcaucasia, former Yugoslavia). National movements are a real political force to be taken into account.

However, the wave of nationalism has its limits. Assuming the burden of power the national elite begins to aware that equal rela-

tions and various ties between various nations and nationalities should be maintained inside the country and outside it so that to retain this power. A nationalistic and chauvinistic frenzy passes, good judgments and moderate approach to this ticklish problem prevail. The future is with the bloom of national cultures, equal union of nations and nationalities both in separate countries and international relations.

*In the political field, the leading tendencies of the transitional period* include:

a) a loss of influence and disintegration of political parties that served the foundation of totalitarian regimes in the former socialist and fascist states; a social base for such parties disappears, although they may persist long in some developing countries;

b) political pluralism, emergence of many parties and movements representing interests of various social groups and carrying on a struggle in the electoral race, but having no chance to get monopolist influence;

c) reducing the heat of political struggle and spread of apathy among electors in the periods of a relatively quite pace of political life changing by the periods of the political heat and conflicts in acute crisis situations under a radical change in the relation of forces and change of generations.

*Regularities of cyclical dynamics of political relations*, identified in the past will persist in future. It is possible to speak that during the formation of a new socio-political system adequate to the humanistically noospheric post-industrial civilization all local civilizations will undergo these or those changes. The long-term political cycle (since the 70s in the 20<sup>th</sup> c. — till the middle of the 20s years of the 21<sup>st</sup> c.) includes several medium-term cycles of 15–20 years. One of them had finished by the beginning of the 90s and was changed by the crisis in this field connected with the transition to the next semi-century cycle. The second embraced the 90s and will end by the end of the first decade of the 21<sup>st</sup> c. It is characterized by radical shifts in the political arena: weakening of the influence of communist, socialist and Christian-democratic parties; the downfall of the socialist political system in the USSR, Eastern Europe, Mongolia (under a possible revival of socio-democratic tendencies adapted to new realities); a wave of conflicts among nations; accelerated rate of generation change of political leaders. The third medium-term cycle will last approximately till the end of the 20s of the 21<sup>st</sup> c. and will be described by consolidation of new political forces, establishment of

the system of political relations in the leading countries adequate to the post-industrial civilization. During the second long-term cycle that will probably last until the 70s of the 21<sup>st</sup> c. (time of the sixth Kondratieff cycle), the post-industrial political system will be developed broadwise involving new and new countries and civilizations and depthward polishing the democratic mechanism of its implementation. At this stage the number of armed conflicts will be reduced, the area of disarmament policy will expand, war will be gradually eliminated from the means to implement political aims.

The general tendency of this period will be extension of rights and democratic freedoms of nationals in most countries of the world. But at the same time these rights will be formal in many ways, strengthening of political passivity and electoral apathy of nationals, strengthening of the influence of a narrow group of people who concentrate economic force with them, mass media and impact on the state machinery will strengthen.

It may be expected that the wave of international terrorism that has reached a new height at the beginning of the 21<sup>st</sup> c. and was born by socio-political contradictions of the transitional period and neo-liberal model of globalization will abate during the second long-term socio-political cycle of the post-industrial period.

***Transformation of the state-legal relations.*** The increase of the role of personality and humanization of society, change in the relation of economic and social forces in the transitional period lead to the essential changes in the *state-legal sphere* of global and local civilizations.

In the last quarter of the 20<sup>th</sup> c. a deep-seated crisis unprecedented since the beginning of the industrial civilization was observed. This process was running in a relatively soft form in civilizations with a traditionally developed system of democratic management (northern American, western European). Crisis and transformation of the statehood evolve in a more rigid and radical form in the post-socialist civilizations (Eurasian, eastern-European civilizations). What tendencies will be intensified in the transitional period to the post-industrial civilization?

**First**, there is a tendency towards the *reduction of the state interference in reproduction and social life*. Since the end of the 19<sup>th</sup> c. the state was more and more persistent in taking the regulation of processes occurring on all «floors» of society's «pyramid». It was performed on behalf of society and for its benefit, but in actual fact for the sake of the establishment of dictatorship of the ruling elite. Such

processes peaked in the totalitarian states that were different by an ideological tint, but were united in their attempts to establish stifling control in all spheres of social life. The state-monopolistic capitalism prevailed in some countries, and the state-bureaucratic socialism in others.

However, this system began to crack in the 70s–80s and broke up at the beginning of the 90s. The frameworks of state regulation of various spheres of society's life narrowed. Spiritual life got out of control first. Scientists, cultural workers, journalists, dissidents made a good deal of efforts to undermine the image of all-mighty and all-good state in society's eyes. The downfall of the planned system, revival of market relations, democratic economic reforms reduced the opportunity of interference in economic processes for the bureaucratic machinery, re-distribution of social wealth at their discretion and in their favor.

However, as it turned out soon, the process of «destatization» (reducing state involvement) of society has the limits that are dangerous to overstep. The state exercises prime functions in the existence and development of society: legislative, social, ecological, strategic-innovative, ensuring its security. If the state weakens, ceases to perform its functions efficiently, the arbitrariness and lawlessness, crime, and shadow economy settle in society. This bitter moral may be drawn from experience of Russia of the 90s. The role and responsibility of the state especially increases in the period of crisis situations; this social law was grounded by **Pitirim Sorokin**. «Every time when a considerable crisis arises in a certain society in the form of war or a threat of war, great hunger, great economic depression or devastating epidemic, then the scale and severity of governmental regulation increase invariably, and society's economy, political regime, way of life and ideology experience totalitarian transformation... On the contrary, every time when a strong crisis decreases in society, scale and severity of governmental regulation decrease, and economic, political, ideological and cultural systems of society are re-converted to peaceful, detotalitarian, and a less regulated and freer way of life...» [181, p. 124]. Consequently, in various phases of economic, ecological and socio-political cycles the role of the state changes in society, it increases at one moment, and decreases at another.

**Second**, the *structure of state power will change*. The principle of division and balance of branches of power (executive, legislative and judicial) will be established in an increasingly large

number of states and civilizations. After completion of the transitional period the balance of powers will be restored, and each will occupy the niche inherent to it (although this process is long and intermittent).

**Third**, centralization of power on the upper level will be replaced with the tendency towards its *decentralization*, a transfer of a number of functions to regional and local (municipal) bodies. Administrative reforms will extend the rights of such bodies. All this enhances democracy of the state power, makes it closer to human needs, restores optimum relation of functions of central and local authorities. But reverse tendencies are observed from time to time.

**Fourth**, *the mechanism of implementing the state legal powers* will change. A democratic electoral system is established, the state machinery is staffed on a professional basis. Unfortunately, non-professionalism widespread in the transitional period leads to great mistakes.

Society's control over the activities of state authorities and abuses of officials is mainly exercised by the «fourth power» – mass media, especially television. To be mediagenic is a necessary feature of a politician seeking the votes of electors. In the transitional period the struggle for influence on information channels assumes an increasingly vehement nature in a number of countries, the state actively interferes in this process.

**Fifth**, the tendency towards the *rule of law* prevails. The system of legal rules with respect to protection of human rights and establishment of equal conditions for everybody is replenished and updated. Conservatism is always inherent to law, it is its advantage, remedy against the poison of adventurism and subjectivism. But also a lagging in the update of legal rules opens space for arbitrariness. Therefore the activities on legislative creative work will be intensified in the transitional period.

The above-mentioned tendencies are implemented in various degrees and various forms in civilizations and countries in the context of their historical traditions and political culture. Cyclical fluctuations are observed in this field.

**Geopolicy: the choice of the model for the structure of the world.** As the period of the decline of the industrial civilization the 20<sup>th</sup> century was characterized by a considerable aggravation of political struggle in the international arena, several waves of war and revolutions, changes in the political system altering the geopolitical map of the world. The colonial system of imperialism collapsed, the

world split into two confronting world systems that struggled for the influence in the liberated countries.

At the end of the 20<sup>th</sup> c., as a result of the disintegration of the USSR, Comecon and the Warsaw Treaty the geopolitical map of the world changed drastically again. The bipolar world became the past. Time has come for the mankind to choose a new model of the structure of the world adequate to changes in alignment of forces in the geopolitical arena.

The choice is between *three models or scenarios of the structure of the world* for the first half of the 21<sup>st</sup> century – unipolar, bipolar and multipolar.

Nowadays the *scenario of the unipolar structure of the world* is most actively promoted. It rests on the indisputable fact that after the disintegration of the USSR the only superpower – USA with a considerable advantage in economic and military might against any other country of the world was left in the world. Furthermore, the USA is the leader in the military-political NATO bloc and in a number of international economic organizations, unions (International Monetary Fund, WTO, World Bank etc.). This allowed **Zbigniew Brzezinski**, an ex-US Secretary of State and ideologist of this scenario, to make a conclusion: «The aim of the US policy should, without any justifications, consist of two parts: necessity to fix its own dominating position... and necessity to establish the geopolitical structure that will be able to ease inevitable upheavals and tension caused by socio-political upheavals. The strategic success reached in this will legitimate the role of America as the first, the only and the last true world super power» [17, p. 254].

The US claims to administration of the unipolar world intensified even more after the tragic events of September 11, 2001.

Another scenario is a *return to the bipolar structure of the world* under the US leadership on the one pole and China or Russia on the other. It has fewer chances to be implemented. Russia is so exhausted as a result of a protracted crisis and has such inconsiderate economic might that it can't seriously claim the role of one of the centers of power. China is rapidly gaining strength and international authority, but it is unlikely to succeed in consolidation of the group of countries around it that will be able to oppose the US and the western bloc. However, by the middle of the 21<sup>st</sup> c. the opportunities of China to become one of the geopolitical poles in the bipolar world will increase considerably.

The *scenario (model) of the multipolar* structure of the world, where there are several centers of attraction looking for and finding compromises in mutual relations and solution of global problems of the 21<sup>st</sup> century, has more chances to be implemented in the second half of the 21<sup>st</sup> c. This scenario is actively advocated by China, Russia and other countries at the beginning of the 21<sup>st</sup> c., but somewhat narrowed by the US expansive geopolitics. However, it has good prospects as such expansion contradicts the global tendency of the 21<sup>st</sup> c. to the diversity of the world and meets a growing opposition of other nations and civilizations.

It may be anticipated that in the first quarter of the 21<sup>st</sup> c. mankind will make the choice between the unipolar and multipolar scenarios of the geopolitical structure of the world, and by the end of the century the multipolar model of the structure of the world will establish itself under the optimistic scenario.

***To peace without war.*** Throughout the millennia wars were an indispensable element of the existence of world and local civilizations. A considerable part of population died in the armed conflicts, and economy worked for war, science invented new and new lethal types of weapons and means of protection against it, the cult of war was in the front rank of upbringing.

By the end of the 20<sup>th</sup> c., it became obvious that wars exhausted themselves as the means for reaching the geopolitical objectives. Invention and expansion of production of new types of mass destruction weapons, its spread among the powers, local civilizations mean that no winner can be in big conflicts with the use of such weapons; moreover, all humankind may die. It was convincingly proved by the scenario of «nuclear winter» elaborated under the guidance of Academician **N.N. Moiseyev** [134].

Awakening to the fact that a further arms race had no future and a threat of self-annihilation of humankind, world leaders took the path to prohibition and liquidation of chemical and bacteriological weapons under international control. At the end of the 20<sup>th</sup> c. the world tendency towards reduction of the GDP share earmarked for the needs of defense was observed.

However, a threat of military conflicts has not been removed from the agenda in the 21<sup>st</sup> c. Numerous military conflicts continue on the interstate and cross-civilizational basis taking tens and hundreds of thousands of lives. Many types of weapons are improved, high-accuracy electronic weapons with a greater destructive force are created. Military-industrial complexes of various countries,

numerous generals and aggressive politicians are interested in the maintenance of military tension, in arms race. The international market of weapons develops, armies are modernized. The stockpiles of weapons of mass destruction are maintained, and their bringing into action may lead to the death of all humankind. A share of military expenditure has begun to grow again in GDP, the so-called asymmetric wars were conducted (Yugoslavia, Afghanistan and Iran).

In the first years of a new century, the world was shaken by a wave of international terrorism. A new growth in expenditure for military purposes, aspiration for establishing the national system of the US missile defense, development of new generations of military equipment became a reaction to this threat. Nearly the whole globe became the area of national interests of the USA and active actions of the NATO. This causes the resistance of other civilizations, concern of the world social movement.

The UN undertakes measures for suppressing periodically occurring local conflicts, implements peace operations, evolves the campaign for promotion of ideas of culture and non-violence, dialogue among civilizations. However, these measures have shown little effect so far.

In the 21<sup>st</sup> century, humankind has faced the determinative alternative. Either a wave of terrorism, local wars that have a chance to develop into the clash among civilizations, leads to the maintenance of society based on violence oriented at production of weapons and education in the cult of war that will lead finally sooner or later to self-annihilation of humankind. Or the world will be built, which will eliminate wars and terrorism, will be oriented at the prevention and peaceful settlement of conflicts and contradictions, education of the younger generation in the spirit of culture of peace, non-violence, and tolerance. This is the main geopolitical challenge of the 21<sup>st</sup> century.

#### **14.3.6. Formation of Integral Socio-cultural System**

*From sensual to integral socio-cultural order.* Deep transformations are taking place in the 21<sup>st</sup> c. in the sphere of spiritual reproduction — in science, culture, education, religion, ethics and ideology. **Pitirim Sorokin** expressed the backbone line of such transformations as «a continuing disintegration of the sensual socio-cultural

system of the West and germination and growth of a new — integral — socio-cultural system — possibly more important for the present and future of humankind» [181, p. 16].

A *sensual socio-cultural system* helped the western civilization to reach the heights in science, culture, education, material life conditions and the domination in the world. However, by the 21<sup>st</sup> c. this system exhausted its potential, found itself in the state of a deep crisis, disintegration of moral, legal and ethical values. It generated two bloodiest world wars in the history, brought humankind to the brink of self-annihilation and used the achievements of science and information revolution for shaking moral values, dissemination of admiss anti-culture.

As a reaction to the decay and disintegration of the sensual socio-cultural system the shoots of new, *integral socio-cultural system* oriented at the supremacy of man, integration of truth (science), good (ethics) and beauty (aesthetics) have begun to form and strengthen; it is this system that is adequate to the humanistically creative essence of the post-industrial civilization. «The epochal struggle between fruitless and destructive forces of the dying sensual system more and more growing and constructive forces of the arising integral socio-cultural system characterizes all spheres of life and affects deeply the way of life of each of us» [Ibid, p. 30].

The formation of the integral socio-cultural system will probably take all space of the 21<sup>st</sup> century. But it will not lead to unification of society, a loss of originality of civilizations. On the contrary, the opportunities will be created for the maintenance and development of the system of values of civilizations of the fifth generation.

***Scientific revolution and formation of the post-industrial paradigm.*** Since the end of the 20<sup>th</sup> c. a great scientific revolution has been evolving that will last not one decade. Its result will be the formation of a new scientific paradigm, a system of world outlooks reflecting the realities of the post-industrial period. The preconditions for such revolution were created already in the 20s of the 20<sup>th</sup> c. when the evolved crisis of the industrial society generated an explosion wave of scientific creativity.

At the turn of the third millennium time has come for the second wave of the outburst of scientific creativity making a new picture of the world. Humankind enters the period of a *knowledge-based society* as only on the basis of cognition of sophisticated dynamical processes in society and nature, a skilful use of the regularities of cyclical-genetic dynamics it is possible to solve efficiently a host of problems

arising before the world and local civilizations in the transitional period, to ensure survival and worthy development of the human race, preservation and advance of the global civilization.

Specifics of a modern scientific revolution:

➡ not physico-chemical and engineering sciences lead in it as in the industrial period, but sciences about life, man, society and his interaction with nature;

➡ information revolution, new opportunities of electronic data processing, use of the Internet and other modern information technologies make it possible look into all spheres of life, to disseminate the obtained knowledge, to make new discoveries;

➡ the formation of the system of continuous education establishes preconditions for a speeded up assimilation of the post-industrial paradigm by new generations of people, their rapid adaptation to the changed conditions;

➡ speeding up of transformations rates in technology and society, creation of an innovative type of economy expands the demand for the results of scientific knowledge as the base of a scientific-technological overturn and reduces time from the birth of a new scientific idea to its practical implementation.

However, a scientific revolution does not mean the triumphal development of new scientific ideas and discoveries. It encounters the inertia of thinking and resistance of obsolete scientific schools — carriers of passing paradigms. In the transitional period, prestige of science that found itself at the stage of painful transformations falls, superstitions, astrology, and quackery get new impulse. These are the signs of crisis in science that usually precede a scientific overturn. It may be anticipated that the authority of scientific knowledge will grow again in the near decades with the evolvement and deepening of the next scientific revolution.

***The Renaissance of high culture.*** The decline of the industrial society found its vivid expression in the crisis of culture, a wave of admass anti-culture, which breaks up with the cultural heritage of the past, with national and civilizational specifics, with ethical mastering of harmony. Using modern information technologies and pursuing the aim of generating super profit, the workers of admass pop-culture impose unified models of pseudo-art destroying harmony, raising trashy feelings, promoting the spread of the cult of violence, sexual permissiveness and oblectation of the senses. However, new tendencies oppose the deep crisis of anti-culture. It is possible to speak about the new Renaissance as the like tendencies were

observed in the Renaissance in the 14<sup>th</sup>–16<sup>th</sup> cc. But this is a new whorl of the development spiral of the world culture reflecting the specifics of the modern stage of the historical advance, formation of spiritual world of the humanistical post-industrial civilization.

What are the major *features and factors of the tendency towards revival of high culture?*

1. First of all, it is tendency towards an indispensable component of a more general stream of *humanization of society*, the rise of spiritual sphere, priority of creative abilities of man. The 21<sup>st</sup> c. is the century of creativity, a new rise of human spirit. People have an inherent love of beauty since the childhood of human race; it found its vivid expression in certain periods. It is not by accident that the Renaissance of art and the great scientific revolution coincide in time in medieval Italy; these are different sides of the same coin, twins that were generated by an ardent impulse of human spirit.

A vivid expression of individuality and fulfillment of spiritual potential of person, ethnical group, nation, civilization is inherent to the post-industrial period. Cultural originality that was oppressed by the industrial standardization revives. Culture becomes the prime sphere of self-expression of personality, social and ethnical group, nation, one of the major channels of interpersonal, cross-civilizational communication. Consequently, the Renaissance of high culture is the backbone line of the formation of the post-industrial civilization, spiritual world of man of the 21<sup>st</sup> c.

The future is not with art destroying or roughening man, but with art creative, disclosing beauty in people and nature. Art is a school of beauty, harmony for each man in the overanxious, chaotic world. However, it does not mean the dominance and obtrusion of any art school or style. Beauty is in diversity. A wide selection of pieces of art will appear that meets the esthetical tastes of various people and their various moods. A forced imposition of these or those schools and styles claiming the monopoly through organized advertising will be no longer relevant. And the main point – the masterpieces of national and world art, world cultural heritage – will become available not only to the select elite, but to a wide public – through advanced information technologies, telecommunications and tourism.

2. The distinctive feature and advantage of the new Renaissance of art is its resting on modern high technologies, *informatization of art and esthetical education*. It enables to choose and record on modern information carriers the masterpieces of painting, musical, opera art,

ballet and architecture, replicate the media of such information in tens and hundreds of thousands, show them on TV, include in the Internet, international and national information networks, system of esthetical education. It helps to make the masterpieces of national and world art accessible at each school, in each family, create the environment refined by art for each man — from the childhood to the vale of years.

3. The revival of art promotes cultural rapprochement of peoples, becomes a significant link in the *internationalization of spiritual life*, but not on the tendency towards unification and standardization of culture inherent to the industrial society, but based on the revival of national cultures and intensive exchange between them. The language of art (painting, sculpture, architecture, music and dance) is clear without translation; it is the base of communication common to all humankind, formation of a global cultural space.

Major transformations will also occur in other spheres of culture. Printing will be completed, and at times ousted by electronic editions, perception of information from TV screens and video monitors, computer displays and multimedia, which enable to choose information individually. Electronic publishing houses experience a real boom. The archive materials, rarities translated into laser disks will remain for centuries and available through channels of satellite communication, Internet and electronic mail. There is not need to sit many days in the reading room of the library if necessary literature and documents may be got through communication channels and be used not leaving your home. With time even more compact and capacious media will be invented, which will make bold forecasts of fantasts a reality, form the structure of the next information revolution somewhere in the middle of the 21<sup>st</sup> c. However, it does not mean that existing libraries and archives, publishers will wind up. They will be necessary not only for lovers of rarities, but as the primary source of machine media, will essentially change their functions and open their depositories using information technologies for millions of users.

**The latter-day revolution in education.** The formation of the post-industrial society as society of knowledge, scientific revolution and technological overturn can't but be accompanied by deepest changes in the system of education which may be characterized as the latter-day revolution in education embracing all the globe a decade after decade.

As previous overturns in education, the latter-day revolution will embrace more than a half of the century passing through a number of

stages. At the first stage (80s–90s of the 20<sup>th</sup> c.) a search for new ways and forms of education adequate to changed conditions of society's development, methods to overcome functional illiteracy and professional incompetence that have assumed a threatening scale were undertaken. At the second stage (first decades of the 21<sup>st</sup> c.) the contents of education will be brought into line with the evolving scientific revolution, and informatization of the educational process will enable to increase its efficiency many times. At the third stage, the achievements of revolution in education will expand broadwise, embracing the developing countries. Thus preconditions for a technological overturn and a gradual surmounting of lagging of these countries, bridging the gap in the efficiency of reproduction and level of life, formation of the global information-educational network however in the context of the specifics of civilizational and national cultures will be created.

What changes will occur in this sphere as a result of the overturn already begun, based upon the tendencies that have already taken shape?

**1. *The contents of education*** will be changed in several directions. The first is *revision of textbooks* where the bulk of knowledge mainly reflecting the world outlook and conditions of development of the passing industrial society is accumulated. Several decades will be necessary, a change of two generations of educators and several generations of textbooks before the bulk of knowledge being transmitted to next generations will be adequate to the contents of the post-industrial civilization. For that the coming civilization should be crystallized and assume more well-defined and obvious features eliminating the chaos of the transitional period.

Another direction is *humanization of education*, overcoming of technocratic and narrow-pragmatic bias, expansion of learning the subjects of the humanitarian set on any level of education, combination of vocational education with esthetical and ethical. Only all-round educated people who have mastered the achievements of national and world culture, able to understand a contradictory cyclical dynamics of all processes and their genetic roots are able to adopt fast to a rapidly changing society, not to be lathes carrying by a rapid stream of the history to unknown vortexes.

The third direction is a wide *polytechnization of education* – both general and vocational. Each man has to deal with several generations of more and more various machines, electronic devices, technological processes in everyday life, in any sphere of labor activity.

A wide engineering training is needed so that to adapt more easily to the renewal of generations of equipment and technological orders.

2. A constantly growing and fast updating extent of knowledge and professional skills are impossible to assimilate resting on the conventional **methods of education**. The aim at mechanical memorization of a huge scope of general knowledge does not justify itself. This knowledge ages fast, inertia of accumulated knowledge and skills does not enable to distinguish new tendencies in life in a timely manner and adapt fast to them. A learned formula does not permit to solve creatively non-conventional tasks. The holder of a solid diploma goofs in an unaccustomed situation. The problem of renewal of knowledge becomes especially urgent during the period of crisis, when previous canons fail, life always uncorks surprises.

The way-out is in orientation at *creative pedagogic*, development of creative abilities of educatee, independence in setting and solving of unconventional tasks, potentiality to switch fast and successfully from one type of activity to another, formation of a multi-sided, dimensional look at objects, processes, partners, a skill to combine the specificity of approach with the open-mindedness. This implies deep and omnifarious knowledge learnt not mechanically, but creatively. Under such an active aim the knowledge learning index is higher many times than in tedious education for guessing tests, taking exams and getting diploma. It is important to combine education with specific practical activities.

The aspirations to unification and standardization of the educational system undertaken in the course of educational reforms in Russia and other countries contradict this tendency in many ways.

3. Approaches to the **organization of education** are changing. The education system from childhood and the youth that was established by centuries (and with a longer and longer period of education) when the students are separated from life and are closed within the walls in secondary schools, vocational educational establishments and universities leads to re-education and mastering anew practical skills on-the-job. At the same time they rarely use and gradually forget a major part of knowledge got during education. Such system of education does not meet new conditions and is passing. *The system of continuous education* that embraces all stages of human life and ensures the development of intellectual, physical, esthetical and moral abilities of person comes to replace it. It is characterized by the variety of contents, forms and methods of education; it includes both general and vocational education establishing condi-

tions for fast assimilation of scientific-technological achievements and implementation of innovative ideas. The development of the system of distant learning promotes it as well as enhancement of the diversity of educational establishments and schools of pedagogic.

4. The technological overturn can't, but involve the sphere of education, transforming radically all set of **education facilities**. Informatization of education, a wide application of computers, educational television, video equipment and interactive multimedia, Internet become the central link of such transformation as well as the fitting out of educational establishments with training equipment, devices, laboratory facilities and other advanced equipment. Japan, Western Europe and the USA have are most successful in computerization and informatization of education, as there the level of saturation of educational establishments and families with such equipment is the highest, flexible computer-based programs, tele- and videofilms are made in large scale.

The formation of *innovative generations* who will assimilate the system of knowledge faster and in full, replenish it constantly and update and use efficiently in their practical activity being orientated at the rhythm of an innovative renewal will be the result of the latter-day revolution in education.

***Ethics and religion in the period of the formation of the post-industrial society.*** Transformation of spiritual life has embraced all spheres of ethics and especially religion. Dynamics of these two spheres is inseparably connected and determines the goals, ideals and rules of relations between people.

Human ideals, their morals in relations with other people, society, in handling cultural values may be based both on belief and knowledge.

At the interface of periods both belief and knowledge shook in many ways, ceased to give an adequate explanation of the world and to serve the base of the serenity of mind. The time came for the general collapse of ideals. It caused three tendencies in the field of religion and morality that manifested themselves vividly at the end of the 20<sup>th</sup> – beginning of the 21<sup>st</sup> centuries and are a reaction to a great extent to the earthliness, tendency to leveling, unification of people inherent to the industrial civilization, especially in its last phase.

The first tendency is *spread of nihilism* that negates not only belief, but also science and all standards of morality. By artistic flair a genius writer **F. Dostoevsky** showed this nascent tendency in the discourses of Verkhovensky («The Demons» novel) that shadowed

forth many extremes of socialism and fascism of the 20<sup>th</sup> c. The universal crisis, ruin of ideals, chaos of the transitional period generated a steep wave of nihilism, especially among the youth. Nihilism is incompatible with traditional standards of morality, it recognizes only the sword-law, devaluates human life. Nihilism is an ideology of the rampancy of crime, corruption and lechery. However, it comes into antagonism with the interests of the majority of society and as chaos of the transitional period is surmounted, it will be ousted to the underground where it has always existed.

The second tendency is *revival of religions* to the extent of strong fundamentalist movements, which sometimes can become prevailing and make the base for terrorism. This tendency has manifested itself to a great extent in the Moslem world where it has social roots: a fast growing population number outstrips the growth of productive forces and motivates the struggle for re-distribution of the world wealth umbrellad by a religious shell as it already happened in the past. The strengthening of influence of Catholic and Orthodox churches is observed.

The aspiration for belief is a reaction to the tendency of secularization in the 19<sup>th</sup>—20<sup>th</sup> centuries, it is caused by disappointment and fear of uncertainty, necessity to fill spiritual vacuum that formed after extrusion of socialist ideals, find a spiritual shelter in the swirl of unexplainable events. Such tendency has a certain positive importance easing spiritual sufferings of people, strengthening ethical principles. But sometimes the features of fundamentalism, intolerance to adherents of other faith, claims to the leading role in the formation of the youth's world outlook, in the possession of wealth and state affairs begin to manifest themselves, though they are incompatible with humanistic essence of religions. Despite Marxists' forecasts world religions will remain in the 21<sup>st</sup> c. satisfying traditional spiritual needs of believers.

Many new religious sects have appeared, some of them calling for violence, murders («Satanic» sect in the USA, Aum Shinrikyo sect in Japan) and suicides. Such sects are very dangerous for society and it fights against them.

The religious revival somewhat restores the balance between material and spiritual, which was violated in the industrial era.

The third tendency is in the replacement of the cult of war, violence, intolerance with *culture of peace, tolerance*, wish and ability to settle arising conflicts not resorting to violence, through reaching a consensus, and finding compromises. The declaration of the UN

millennium of September 8, 2000 orients at this, proclaiming that tolerance is one of the fundamental values having an essential significance for international relations in the 21<sup>st</sup> century and that it should include an active building of the culture of peace and dialogue among civilizations so that people would respect each other with all diversity of their convictions, cultures and languages, would not fear distinctions within society and between societies, would not suppress, but cherish them as the most valuable property of humankind.

However, the implementation of this tendency is impossible without changing the contents of today's mass media, press, television and Internet. Today they are overfilled with the scenes of murders, violence, terrorism and pornography and are bringing up the younger generation in such spirit. It is unreal to solve this problem through the introduction of mass censorship; the matter in question should be the sense of responsibility and self-restriction of those representing the «fourth power», which renders an enormous influence on human spiritual life, especially children and teenagers.

In the period of the formation and maturity of the post-industrial society it is likely that ideals and standards of ethics that meet the essence of this humanistic society will establish themselves — ideals, whose core is in the self-affirmation and all-round development of human personality, in the optimistic recognition of the outlooks of a step-by-step cyclical advance of human society, in tolerance to ideals, beliefs and ethical rules of other people. The germs of such morals are already maturing in many countries, but they are not prevailing yet.

#### **14.4. Outlooks of the Dynamics and Interaction among Local Civilizations of the Fifth Generation**

The world of local civilizations is going through deep upheavals. Globalization and its unifying tendencies challenge the survival of local civilizations in future society. They respond to such threat by a deepening of civilizational distinctions, formation of a new generation of civilizations. The issue of the clash or dialogue and partnership of civilizations in the solution of global challenges of the 21<sup>st</sup>

century comes to the forefront. All these contradictory tendencies require comprehension and studying, determination of their causes, driving forces in the outlook for the 21<sup>st</sup> century.

#### **14.4.1 Challenge of Globalization and Response of Civilizations**

A rapidly evolving globalization transforming all civilizational space is the deepest and most contradictory phenomenon in the dynamics of humankind at the beginning of the 21<sup>st</sup> century. All the system of the civilizational structure of the world is challenged for the first time ever in history. Both the essence of this challenge and response of local civilizations to it demand comprehension.

***Unifying tendencies of globalization.*** A threat to the existence of a motley gamut of local civilization originates from the very essence of a modern model of globalization being pursued under the leadership and in the interests of western civilizations and TNC world. What tendencies of this model of globalization are especially dangerous for the fates of civilizations?

**First**, under the now prevailing model of globalization the *system of values*, which makes the essence, inheritable genotype, major distinctive feature of each civilization, *is unified according to the western model*. Powerful, organized flows of information coming through telenetworks, Internet and mass media, through the system of education are used for such purpose and they render a determinative influence on the younger generation. Unified needs, demands for goods and services, political assessments and ideological aspirations favorable for owners of mass media are formed by information and Internet companies. Thus the generation of people not knowing their past, devoid of national and cultural heritage and civilizational originality, obeying implicitly to obvious and hidden decrees of people who dictate them the system of values and rules of behavior is formed.

**Second**, *local civilizations are deprived of economic independence* in ways and methods for the performance of their business activities based on their own interests. Powerful TNC become the masters of life worldwide. They determine the structure of production and property, mutual flows of goods, services and capitals on the world market. Being consumed by a secret passion for super profit they direct to their side (and to the side of few rich civilizations where they are based) the flows of world natural rent, ecological anti rent,

technological and financial quasi rent, re-distribute wealth made in various countries and civilizations. The main cause of the growth of the gap between the rich and poor countries and civilizations that has reached a critical depth, an increasing threat of a global catastrophe is exactly in the all-might and self-interest of TNC.

**Third**, *modern globalization is oriented at the unipolar world*, the dictate of the only super power assuming the function of transformation of geopolitical space according to the western model, establishment of ideals of western democracy. The latter is, however, regulated in the interests of the upper crust ruling in the world closely merged with the TNC top managers and advocating their global interests. And in doing so traditions and distinctions of various civilizations accumulated by millennia are ignored, and their attempts to resist are suppressed by force.

**Fourth**, *the present model of globalization unifies the way of use of natural resources* and conservation of environment — and again in the interests of rich civilizations and TNC, depriving other civilizations of the opportunity to dispose of their environmental assets independently and preserve them for future generations. It is not by accident that the concept of sustainable development approved at the summit conference in Rio de Janeiro has remained practically not implemented, drowned in a crop of declarations, and a threat of global eco-catastrophe continues growing.

If the said tendencies persist in the present century, they may lead to melting of local civilizations in the globalized super power. **A. A. Zinoviev** sees such prospect, believing that time of independent civilizations has passed away on the planet

How can the historical place of globalization orientated at unification of local civilizations be assessed?

Some scientists believe that it is exactly the real post-industrial world one has to take into account. But it is more likely the last bastion of the dying late industrial society sentenced to vanishing from the historical arena than the world of the future humanistically noospheric post-industrial civilization.

Globalization has objective grounds, it is impossible either to stop or to reverse it. Does it mean that the world will develop according to its present neo-liberal model dooming local civilizations to melting in the unified, westernized global super society?

The humankind is able to change the vector, the nature of globalization, to give it «human face», to make it serve the interests of most of humankind while maintaining civilization-

al diversity of humankind as an indispensable condition for its survival and sustainable development. The concept of sustainable developed and solution of global problems based on the dialogue and partnership of civilizations proposed by the Pitirim Sorokin-Nikolai Kondratieff International Institute is aimed at it [44], as well as scientific proceedings where the use of the world natural rent, ecological anti rent, technological and financial quasi rent are proposed as sources of global sustainable development [244].

**Formation of the fifth generation of local civilizations.** Civilizations respond to the challenge of globalization by revival and strengthening of differentiation of civilizational values, formation of a new generation of local civilizations.

**Arnold Toynbee** who formulated the postulate of a regular change of generations of civilizations, distinguished five civilizations of the third generation inherent to the industrial period [191]:

- ➔ Western society united by western Christianity;
- ➔ Orthodox-Christian society in Southeastern Europe and Russia;
- ➔ Islamic society from North Africa and Near East to the Great Wall of China;
- ➔ Hinduist society in tropical subcontinental India;
- ➔ Far Eastern society in subtropical and moderate regions of Southeastern Asia.

However, it is rather not third, but the fourth generation of civilizations; the framework of the Far Eastern society is also extremely wide uniting Chinese, Japanese and partially Buddhist civilizations.

**S. Huntington** distinguishes 8 modern civilizations: Western, Orthodox, Islamic, Chinese, Indian, Japanese, Latin American and African (south to the Sahara) [259, p. 84–85].

It appears valid to speak about the *formation of the fifth generation of local civilizations at the beginning of the 21<sup>st</sup> c.* that may be divided into three groups (*fig. 14.3*):

- ➔ western — Western European, Eastern European, North American (the USA and Canada), Latin American and Oceanic;
- ➔ eastern — Chinese, Japanese, Indian, Moslem and Buddhist;
- ➔ mixed — Eurasian (Russian) and African (south to the Sahara).

The formation of the fifth generation of local civilizations is determined by a number of factors:

➡ the problem of interaction among civilizations, alternative of either their clash or dialogue and partnership comes to the forefront in the system of international relations;

➡ speeding up of globalization according to the western model is carrying a threat of melting of civilizations in the unified global super society;

➡ uneven formation of the post-industrial world civilization is changing the conditions of functioning and interaction among local civilizations;

➡ formation of the integral socio-cultural system is changing the system of values – the core of each civilization – in many ways.

However, the formation of a new generation of local civilizations is not completed yet; it may take all space of the first half of the 21<sup>st</sup> c. and be accompanied by changes in its composition. First of all, it refers to the *Eastern European civilization* that has no well-defined core. In the 50s–80s it was under a strong influence of the Eurasian civilization (USSR), made a part of the world system of socialism. In the 90s this civilization found its independent shape, but not for long. From the beginning of the 21<sup>st</sup> c. it is included in the composition of the Western European civilization step by step, making a part of the European Union and the NATO.

Expansion of the Western European civilization extends also to the components of once united *Eurasian civilization*. First of all this concerned the Baltic Republics. Ukraine, Moldavia and Georgia are next. In the distant future the claims to the European part of Russia may arise if the matter in question is the actual division of the Russian civilization. Central Asian republics may find themselves in the area of the influence of the Moslem civilization, a considerable part of Siberia and Far East – Chinese civilization (the Kosovo variant may repeat in some regions), and also the Japanese and North American civilization.

It does not mean that the Russian civilization will leave the historical scene, that it will fail to find the place among civilizations of the fifth generation. Its persistence is more likely, but already not as Eurasian, but the Russian or Eastern Slavic civilization. But it has to get the second wind for that, to work out and implement consistently the strategy of a breakthrough into the civilizational space of the 21<sup>st</sup> century. There is no such strategy yet.

The fates of Buddhist and African (south to Sahara) civilizations are not completely clear yet. Thailand, Sri Lanka, Viet Nam, Myanmar (Burma) and South Korea may be included in the

*Buddhist civilization* with a certain share of conditionality. But there is no well-defined core and tying up threads, there are also no grounds for their inclusion into the composition of neighboring civilizations — Indian, Chinese and Moslem.

The *African civilization* quite motley by ethnical and confessional structure, economic and technological development and where the pre-industrial or early industrial technological and economic orders prevail is in a state of depression, the area of a technological disaster expands, hunger, AIDS and other epidemics rage on vast spaces, bloody clashes occur. Meanwhile, the population number grows fast — from 180 mln. in 1950 to 670.3 mln. in 2000 and up to 1692 mln. under the middle variant of the UN's demographic forecast in 2050 — in 9.4 times for 100 years [272, p. 50]. It is a weak link of the modern global civilization, and Africa is unable to handle a protracted civilizational crisis through own efforts. Concerted and efficient assistance of more developed civilizations, the whole world community is necessary.

Heterogeneous by its composition is *Moslem civilization* that has no single center. Under the easing of confrontation with the USA, it may differentiate in the second half of the 21<sup>st</sup> c. (as it is the case now with the Western civilization) into Arabic, Iranian (Persian), Islamic-Indian and Islamic-Far Eastern (Indonesia, Malaysia etc.).

The final composition of the fifth generation of local civilizations will be determined only by the end of the 21<sup>st</sup> c.; it may turn out different from that of the beginning of this century.

#### **14.4.2. Transformation of Local Civilizations of the Fifth Generation**

Local civilizations have entered the 21<sup>st</sup> century being in the various phases of their life cycle, on various levels of socio-economic and scientific-technological development. They have a different natural-ecological and technological potential (*fig. 14.4*).

Comparatively young civilizations — North American, Latin American as well as Moslem — are in their active phase, although in the polar state in terms of the level of economic development. Ancient civilizations of China and India, which were ousted to the background in the industrial society and were dependent on the West, entered the new cycle being on its up wave. China demonstrates an example of a fast long-term growth. The Japanese civiliza-

tion, which went through the period of rise in the post-war period and became the second power of the world by GDP output, experiences the slack period, stagnation. The Eurasian civilization, which was among the leaders in the second half of the 20<sup>th</sup> c. and headed the world system of socialism, suffered wreck at the end of the century, and it is in the phase of disintegration. The African civilization (south to the Sahara) found itself in the state of collapse. The Latin American civilization demonstrates the signs of the revival phase, which precedes the rise. The Oceanic civilization is deeply polarized: along with such developed countries as Australia and New Zealand it includes a large number of small and tiny states of Micronesia, Polynesia and Melanesia on the low level of development.

What will include the *major directions of transformation of local civilizations in the 21<sup>st</sup> century?*

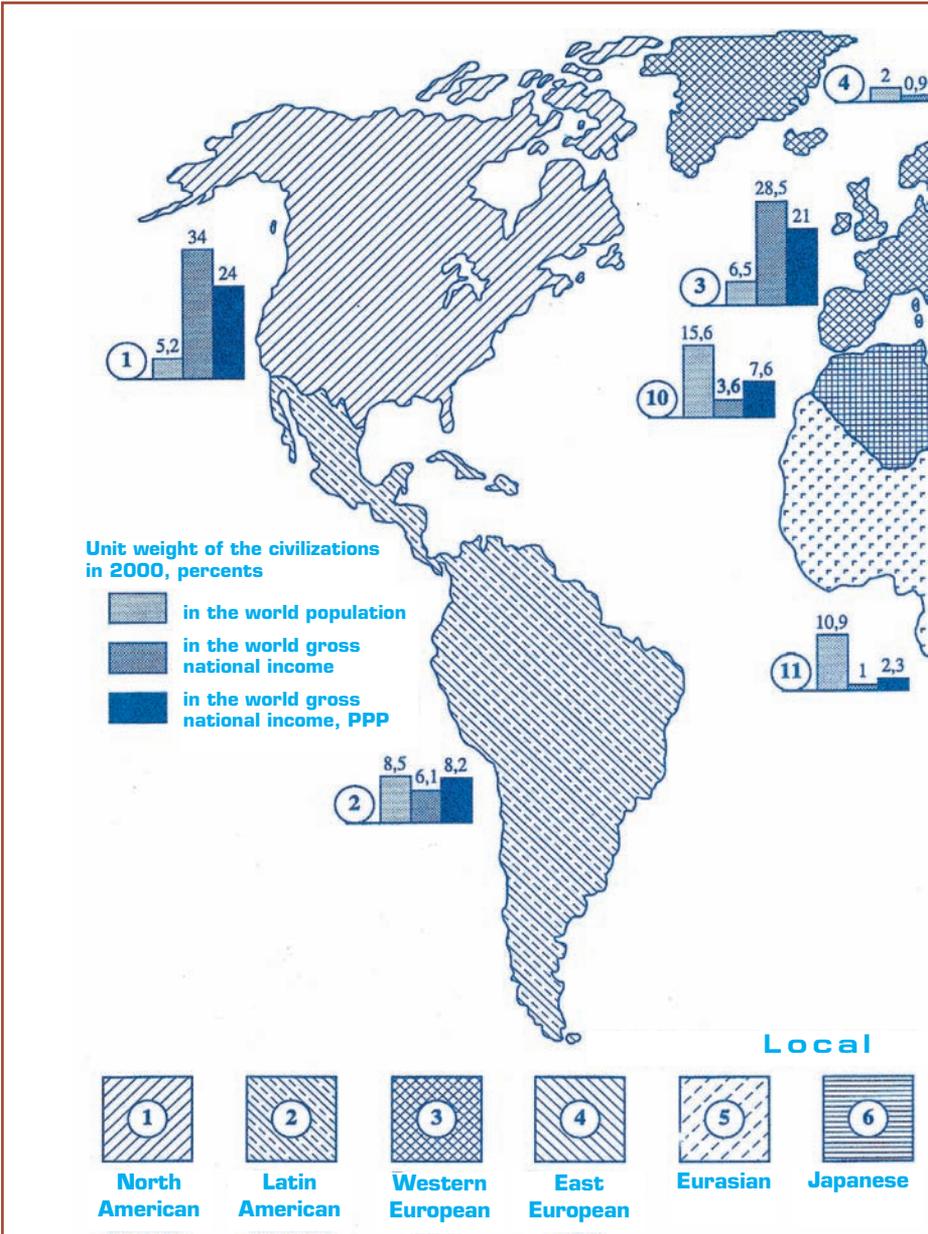
1. *Transformation of socio-cultural system.* According to **Pitirim Sorokin's** forecast, a transition from the prevailing sensual system in the West and the ideational (super sensual) system in the East to the harmonious integral order is inevitable, which, however, will have its own modifications in western and eastern civilizations. This process will take a long period of time, will run from the various original states and pass through intermediate stages.

The transformation of a socio-cultural system suggests a priority growth of spiritual reproduction, bringing the level of science and education closer in various civilizations, maintaining and enhancement of civilizational cultural heritage, spread of the culture of peace and tolerance, surmounting of religious fanaticism. The diffusion of the ideas of dialogue and partnership among civilizations will foster it.

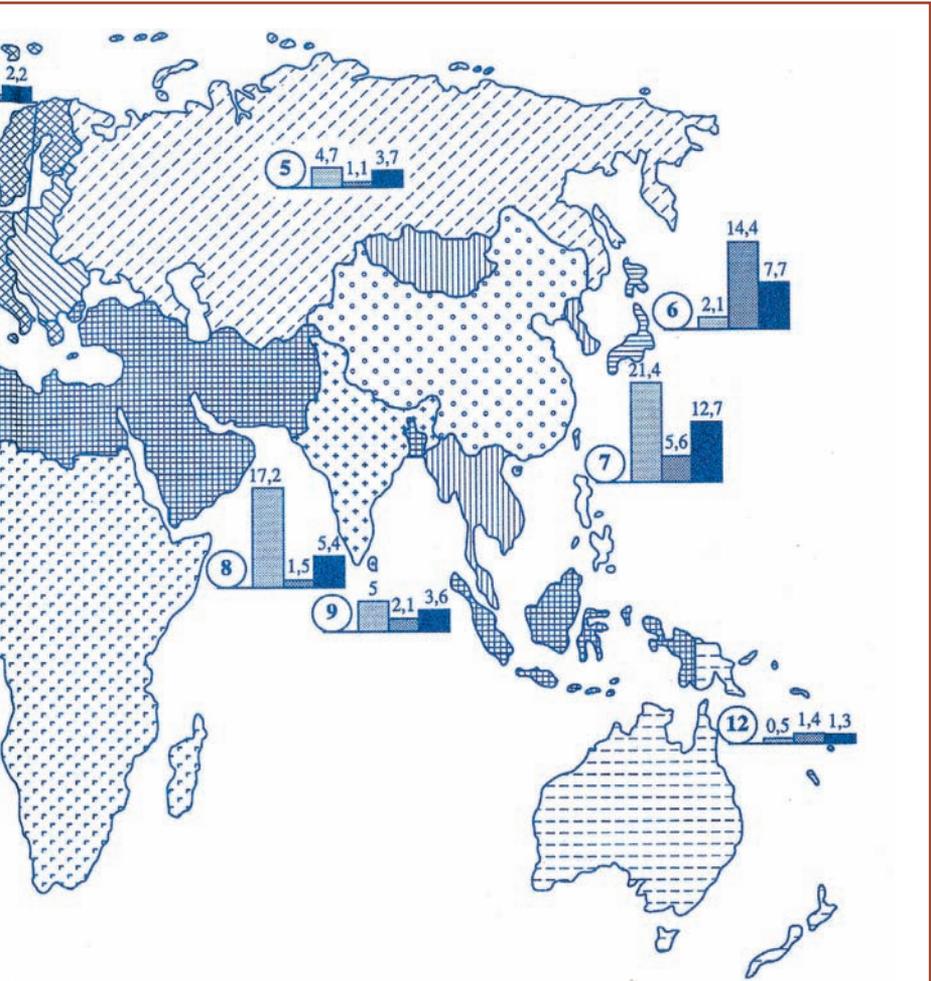
2. *In the field of technology and economy,* transformation of civilizations is in the bridging of a technological and economic gap between social strata, in the change of the present model of globalization towards the directions ensuring a global sustainable development. It is impossible to reach this without restraining the omnipotence of TNC, without profiting from the achievements of the latter-day technological overturn by all civilizations, without the elaboration and implementation of the mechanism of more even and just distribution and use of the world rent, anti rent and quasi rent, formation of the network of global funds for support of development of lagging civilizations. In other words, it is impossible without the working out

Figure 1.4.3.

**Local Civilizations of the 5<sup>th</sup> Generation: Demographic and**



**Economic Weight**



**Civilizations**



Chinese



Indian



Buddhist



Moslem



African



Oceanic

of efficient dialogue, interaction and partnership among all civilizations regardless of their level of development.

**3.** *In the geopolitical field the choice between the unipolar and multi-polar variants of the world structure will be made in the coming decades.* The intensification of tendencies towards the unipolar world is fraught with the aggravation a threat of the clash among civilizations. The establishment of the multi-polar world on the principles of dialogue and partnership among civilizations will create the conditions for efficient transformation, development and convergence of local civilizations of a new generation. The increase of the role of the international organization of UNO type will foster it.

**4.** *It will be necessary to shape a concerted global demographic and migration policy in two variations – for countries and civilizations with high growth rates and abundance of population and for countries and civilizations that have found itself in the state of depopulation.* Demographic and migration problems assume a global nature and require differentiated approaches.

**5.** *The working out and consistent pursuance of a long-term global natural-ecological strategy by the world community becomes a necessity.* It must be oriented at the saving of natural resources, environmental pollution reduction based on resource-saving, environmentally friendly technologies in all civilizations based, many-sided assistance from the vanguard civilizations to lagging as mineral wealth and environment are of global nature in their essence. The foundations of such strategy were laid at the summits in Rio de Janeiro (1992) and Johannesburg (2000). However, it is pursued slowly, and a threat of global ecocatastrophe is aggravating.

***Development of the forms of interaction between civilizations.*** The transformation will embrace not only the contents of cross-civilizational relations in the 21<sup>st</sup> c., but their forms, it will require the development of new mechanism of dialogue, cooperation and partnership among civilizations of the fourth and fifth generations, which will meet the realities of the post-industrial period.

First of all, a gradual reduction of the sphere of application of the forms of interaction between civilizations associated with their *confrontation and antagonism* should be expected. Although the first years of the present century are accompanied by the outburst of international terrorism, local cross-civilizational conflicts in many ways of confrontational nature, it may be assumed that in the next decades these tendencies will ease under pressure of the common

nature of planetary interests, need for the maintaining of the global civilization and survival of humankind in the face of new global threats. However, the reverse scenario of an aggravating confrontation (between the north American and Moslem civilizations, India and Pakistan) that might transform into the clash among civilizations with far-reaching destructive consequences should not be excluded in full.

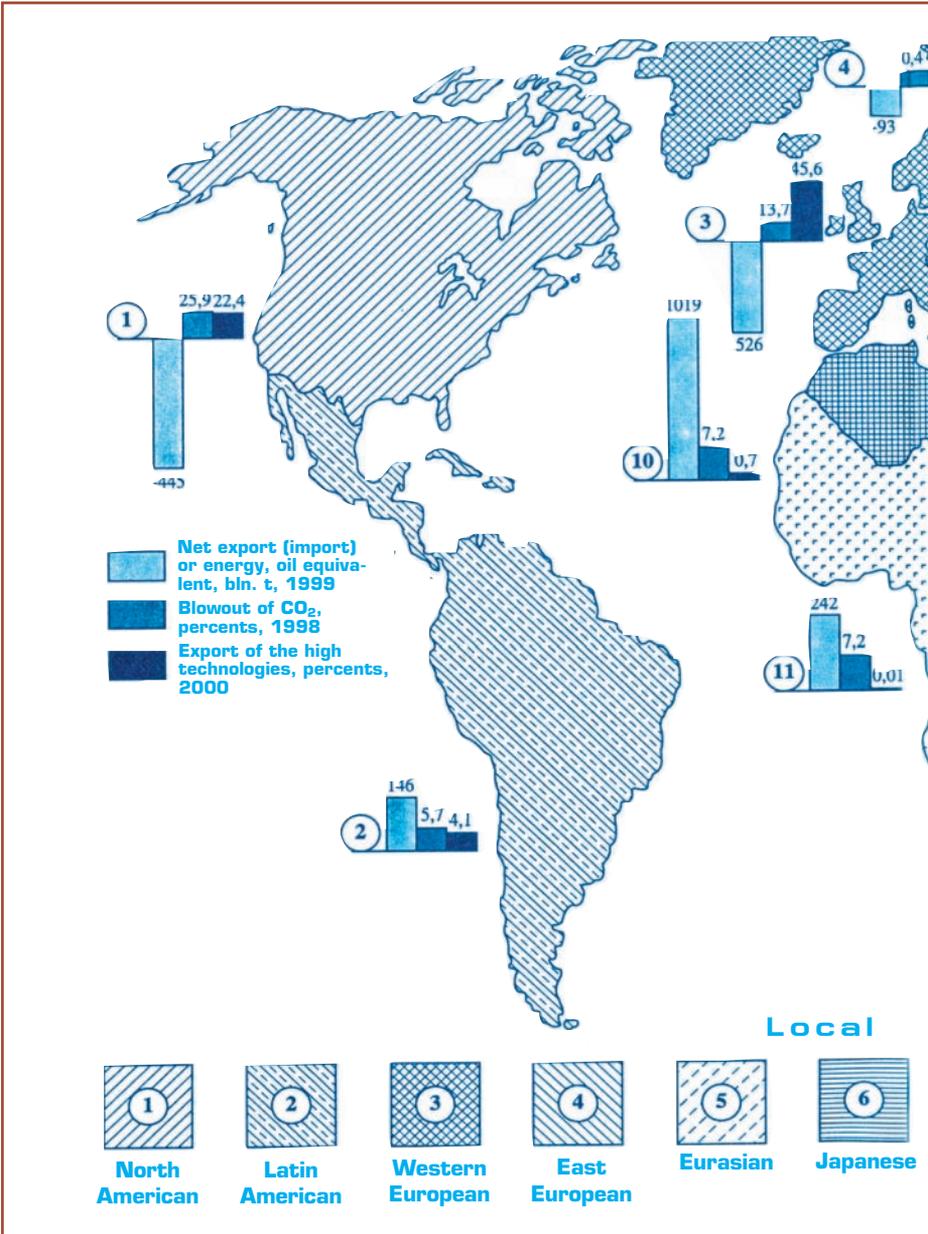
The forms of interaction of the reverse direction — *dialogue of cooperation and partnership among civilizations* in ensuring of their development and solution of the global problems of the 21<sup>st</sup> century — have an encouraging outlook. The precondition for the implementation of such scenario is the awareness of the common character of the vital interests of all civilizations, their responsibility for the future generations, formation of the integral socio-cultural system and globalization with a «human face».

*The dialogue among civilizations* is a primary form of their positive interaction. With all seeming simplicity of this notion it is very heterogeneous, and requires adequate preconditions and mechanisms for its implementation. First of all, it is not a senseless «dialogue among deaf»: it is necessary that each party in the bilateral and multi-lateral dialogue should be opened for perception of the voice and arguments of other parties, understanding of the originality of their cultures, mentality and originality of interests, should accompany the dialogue; only in such case the dialogue will be fruitful, mutually promising and orientated at the achievement of mutual understanding, mutual movement, compromise in the settlement of arising contradictions and conflicts in the context of interests of all parties (the hopes for the world without any conflicts is illusory even in the distant future).

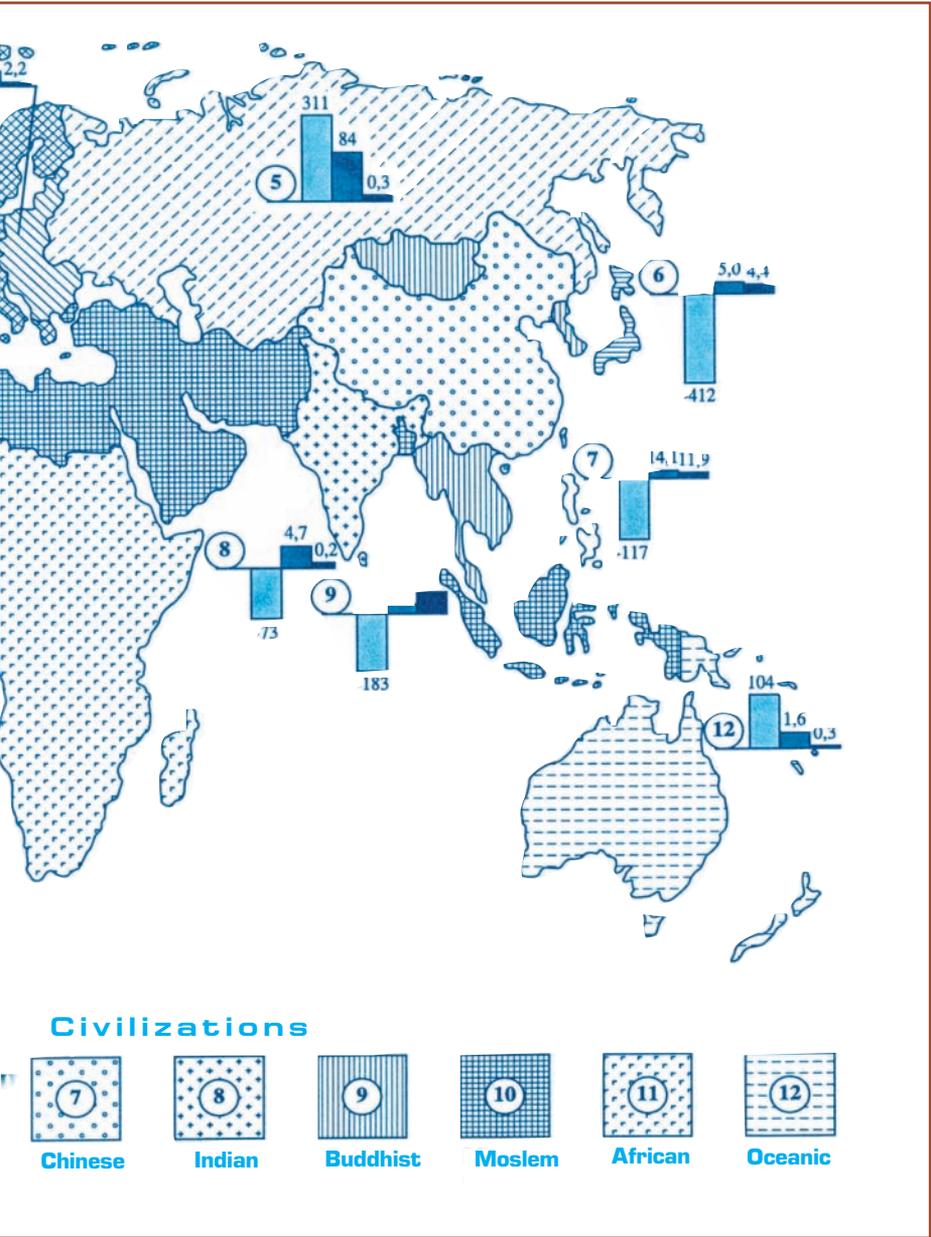
Efficient fields and mechanisms of the dialogue among civilizations are necessary. First of all, the UNO, UNESCO and other international organizations embracing the whole world and its components (for instance, the Asia-Pacific Economic Cooperation, Shanghai Cooperation Organization, Organization for Security and Cooperation in Europe etc.) or directions (for instance, World Trade Organization, World Tourism Organization and International Trade Unions) are the forums for such dialogue. The fields for dialogue is informational (Internet, telecommunications and mass media), economic (mutual trade in goods and services, flows of international investments and credit-monetary sphere), culture and sports (exchange of

Figure 14.4.

**Local Civilizations in the Global Energetic, Ecologic**



and Technologic Space



cultural values, international sport competitions, translation of works of literature etc.), international tourism, international youth movements and students and teachers exchanges.

The dialogue among civilizations is maintained not only between states, but also nongovernmental organizations, businesses and other economic organizations, and also between people and not only in international tourism, but at work inside the same enterprises, living on the same territory, through mixed marriages.

With time the forms, field and mechanisms of the dialogue among civilizations will develop, enhance, become more varied and efficient forming the all-planetary tissue, a favorable background for higher forms of cross-civilizational interaction — cooperation and partnership among civilizations.

*Cooperation of civilizations* is of a more specific nature and has a narrower field in comparison with a dialogue. It is directed at the solution of matters where various civilizations have a common interest and which are impossible to solve within and by efforts of one civilization. The matter in question is ecological problems, general policy in the field of sustainable development, regulation of transport and tourist flows, world currency relations, protection of intellectual property and the preservation of the world cultural and natural heritage and the like. Forms and mechanisms of such cooperation are distinguished depending on its purposes, specifics of the object, level of interest etc. A lot of examples of such fruitful cooperation of civilizations can be adduced, its sphere of application expands.

*Partnership of civilizations* is the supreme, the closest and the most efficient form of their positive interaction. It differs from cooperation by depth, stability and many-sidedness, closer tying and diversity of mutual interests on a constant base. The partnership in the nuclear power, control over weapons and reduction (modern weapons of mass destruction (nuclear, chemical and biological) could be adduced as examples. The increasing interaction between European states within the European Union may serve as a model of partnership; this model may be an example of partnership; this model may be an example not only for partnership within civilization, but a cross-civilizational partnership. The sphere of partnership is considerably narrower than cooperation and the dialogue particularly.

The development of partnership among civilizations requires the formation of the efficient organizational-economic mechanism. For instance, enlargement and closer definition of the functions of the

UN General Assembly, Security Council and other international organizations will be necessary in order to solve the problems of sustainable development in global scale; adoption of international rules (formation of the elements of international law); establishment of global funds — ecological, technological, socio-cultural — on deductions from the world natural rent, ecological anti rent, technological and financial quasi rent; elaboration of long-term global programmes and bodies carrying them out are of utmost importance.

Formation of the system of international transport corridors and international bodies representing states and civilizations concerned and ensuring their function may become another direction of partnership among civilizations; the source of their financing may be deductions from the world transport rent generated from their operation.

It may be anticipated with a certain degree of reliability that the sphere of partnership among civilizations will intensify in the 21<sup>st</sup> century. Mechanisms and fields of partnership will expand and enhance forming a base for a positive variant of globalization. And the forecast scenario may be different by rates and intensity of the development of such processes.

In the second half of the 21<sup>st</sup> c., under establishment and intensification of these tendencies it may be anticipated that the world community will finally enter the trunk line of dialogue, cooperation and partnership among civilizations and will mainly succeed in solving the focal global problems on this road or establish real preconditions for their settlement.

### **14.4.3. Outlooks of the Dynamics of Local Civilizations in the 21<sup>st</sup> Century**

The present century is characterized by a number of new tendencies towards shifts in a geocivilizational space. The western civilization once making the whole is dividing into separate constituents (Western European, North American, Latin American and Oceanic), divergence of their systems of values and vital interests takes place. The role of eastern civilizations increases, which are going through the period of a rise. The Eurasian and African civilizations are in the state of decline.

***Integration of the Western European civilization.*** Throughout two millennia Western Europe was the arena of constant wars and

conflicts, and in the 20<sup>th</sup> c. it became the source of two bloodiest world wars in the history. In the 21<sup>st</sup> c. a global experiment was carried out on the territory of Western Europe, a pilot project for the formation of a civilizational commonness on the principles of dialogue, equal cooperation and partnership of European states different by national languages, culture, historical traditions, faith, level of economic and social development. Also other multi-state civilizations may follow in future the experience gained here.

In the first half of the 21<sup>st</sup> c. the following tendencies of development of the Western European civilization may be anticipated:

➔ strengthening of economic unity on the basis of a single monetary-finance system, free flow of capital and people, bridging the level of development of lagging countries. This will give additional synergetic, integral effect, improve stability, sustainability of all-European development, permits to reduce the amplitude of cyclical fluctuations;

➔ the development of dialogue of cultures, formation of a single cultural-information, scientific and educational space will contribute to the formation of the integral socio-cultural system under the preservation of diversity of national languages and cultures;

➔ demographic (tendency to depopulation) and ecological (a shortage of natural resources, high level of environmental pollution) problems will be solved on the basis of dialogue and partnership with other civilizations, expansion of the influx of migrants, import of natural raw materials, and efficient environmental policy;

➔ in the geopolitical space, the Western European civilization will play mainly a stabilizing role and at the same time it will become a pioneer in the formation of supranational civilizational-political structures and civil society, elaboration of common democratic institute, common policy of legislative, executive and judicial power.

The Western European civilization will have to solve a good deal of difficult problems on the integral path:

➔ admission of the countries of Eastern Europe, Baltic in the expanding framework of the European Union, and probably the CIS countries — Ukraine, Moldova, countries of Transcaucasia in future, bringing closer the level of development with the countries of Western Europe. The all-European civilization will be formed thereby, and the Eastern European and a part of the Eurasian be absorbed in a «soft» form;

➔ overcoming of the grounds of cross-civilizational conflicts on the Balkan, in Transcaucasia, solution of the problems of integration

and consensus among representatives of various civilizations and cultures as a result of the influx of immigrants to Western Europe; maintaining of cultural heritage, diversity of languages and cultures in the face of unifying tendencies of globalization resting on the powerful information flows.

Assessing the latter-day state of the western civilization it may be said that it is going through the phase of rise of a new life cycles that began after World War II. «The Decline of Europe» has not taken place. Having passed through terrible ordeals and drawing lessons therefrom it has found forces for a new whorl of the civilizational advance. Although a share of Western Europe reduced in the world GDP from 36.7 % in 1900 to 20.8% in 2000 (264, p. 509), integration becomes a launching pad for a new rise in the 21<sup>st</sup> c. if the problems that Europe faces will be solved.

***The might of the North American civilization.*** At the turn of the century the North American civilization (and its core – the USA) found itself at the peak of its approximately three-century history. It is the youngest and most powerful of civilizations of the fourth generations, occupies a leading place in the world economy. With a share in the world population of 5.1% in 2002, 34.4% of world gross internal revenue falls to this civilization, 14.7% of export and 25% of power consumption.

In the 20<sup>th</sup> c., the North American civilization was in extremely favorable conditions for development. Having taken part in two world wars it did not suffer their destructive effect, and got a powerful impulse to the rise in the military-industrial complex. With the disintegration of the USSR, the USA has remained the only super power heading the western civilizations and leading in the world with the most powerful economic, scientific-technological and military potential. This generated the aspirations for the formation of the unipolar world with the USA at the head, establishment of the US dominance in all regions of the planet, using globalization for such purposes and the superior forces of the NATO, turning the whole world into the Pax Americana.

One of the three possible scenarios of the development of the north American civilization with various consequences can be realized in the first half of the 21<sup>st</sup> century.

The first scenario is *the continuation and strengthening of the course for the establishment of the unipolar world structure with the US dominance* under the subordination of other civilizations and suppression of their resistance under the guise of combating terrorism,

active use of globalization according to the western model in the interests of building up of the US economic might. In fact, this is an attempt to form a technocratic unipolar variant of the late industrial civilization, the first global empire in the history.

However, this scenario will meet the growing resistance of non-western civilizations, intensification of the struggle for another variant of globalization and for the multi-polar world that will finally aggravate conflicts and might lead to the clash of civilizations with time, first of all the clash between north American and Moslem. The tragic events of September 11, 2001 are a micro model of such clash.

Also, internal factors should be taken into account. With the growth of migration the north American civilization is assuming an increasingly mixed nature; by the middle of the 21<sup>st</sup> c. non-European population will prevail in the USA that will complicate the problem of internal cross-civilizational relations like in Western Europe. And also in the socio-cultural relation, the USA are unlikely to be able to retain the leadership in transformation of the sensual socio-cultural system into integral.

The second scenario: *having realized the dangers of expansion of cross-civilizational ties, the US will return to the course for isolation* (as it was the case after World War I), try to restrict its participation in the world affairs and in settlement of global contradictions. These elements are also observed now: a refusal to sign the Kyoto protocol. However, this scenario is less probable: US-based TNC are closely connected with the world economic space, the NATO operations rest on the US military might; the US economy can't develop successfully without external markets of commodities, capitals and manpower.

The third scenario is less realized in the USA so far and in general in the western world, but it is most promising and optimistic for the future of both north American and other civilizations. Resting on its economic and technological might *the US may become one of pioneers and engines in the formation of the humanistically noospheric society* based on dialogue, equal cooperation and partnership among civilizations, giving a «human face» to globalization. But in order to do so the north American politicians, ideologists, scientists have to «step on the throat of their own song», change the socio-cultural aims, abandon the dream of «Pax Americana». It is impossible for the present generation of politicians and ideologists. But as **Arthur M. Schlesinger, Jr.** showed, generations change and the political aims change with them reflecting changes occurring in the world. «It is

life experience of generations, that is what plays a role of a cycle... Generations overlap each other and intertwine. Nevertheless, the epochal events create borders between generations... Political life of each generation lasts approximately thirty years. Each generation, coming of political age, spends first fifteen years challenging the generation that has already power and protects it. Then this new generation itself comes to power for fifteen years and its political activity decreases thereafter, and a new growing generation claims the role of a successor» [232, p. 50, 51].

The now ruling generation in the USA was moulded during the «Cold War» and bears its imprint. But the next generation that looks different at the world and may elect other scenario of the future already begins to speak.

***The revival of the civilizations of the East.*** The 20<sup>th</sup> century has become the century of awakening of the civilizations of the East embracing a greater part of the Eurasian and a part of the African continent and representing most of the population on the planet. Gaining of independence was only the beginning of a hard and long way of the revival of the civilizations of the East, which assumed visible features from the 60s–70s years and will assume a new space in the 21<sup>st</sup> c. when according to **Pitirim Sorokin's** foresight the center of creative leadership of humankind will shift to the East. The following factors corroborate this tendency.

**First**, the overwhelming majority of the population on the planet lives in the civilizations of the East, and its share will increase in the outlook for the 21<sup>st</sup> c. Literacy and activity of this population is growing; its desire to ensure worthy conditions of life for themselves and future generations is increasing.

**Second**, a number of the states of the Buddhist and Moslem civilizations achieve a good pace of growth; improve the level and quality of life of their population following Japan, China, India, new industrial countries that have demonstrated an example of a technological and economic breakthrough. A share of eastern civilizations increases in the world economic product, this tendency is likely to persist in the 21<sup>st</sup> century.

**Third**, civilizations of the East have the richest socio-cultural heritage, great culture that goes through the beginning of a new period of the Renaissance now and is able to oppose the unifying pressure of globalization according to western models. As **L.N. Gumilev** put it most peoples of the East are in the state of a passionary push and this state is likely to persist in the first half of the 21<sup>st</sup> c. (unlike

civilizations of the West where such push is already a historical past).

Therefore it may be foreseen with a considerable degree of probability that the present century will become the century of the revival and high activity of civilizations of the East. The priority of spiritual values and a feeling of unity with nature inherent to the eastern civilizations is a typical feature of the humanistically noospheric post-industrial civilization and the integral socio-cultural system, whose time of triumph will probably come by the middle of the 21<sup>st</sup> century.

***The outlooks of the Japanese civilization.*** Japan that met defeat in World War II and claimed the role of the leader and the mistress of the East, was first to show an example of a rapid revival, which was called the «Japanese Economic Miracle». With an inconsiderable share of population in the world (total 2–3%) and inconsiderable natural resources, it has managed to rise to the level of the second power of the world in terms of its economic might for several decades and increased its share from 2.9% in 1950 to 8.6% in 1990 in the world GDP, thus it increased the GDP output 14 times for 50 years (in comparable prices) while the overall increase made 6.2 times in the world. [133, p. 505, 509].

However, by the end of the 20<sup>th</sup> c. the energy of such push turned out considerably exhausted for the Japanese civilization, which reached the most heights in the East. Difficult times have come. The tendency to depopulation and its aging becomes obvious; according to the UN's forecast the population number in Japan will reduce from 127 mln. people in 2000 to 110 in 2050, and the mean age will grow from 22.3 years in 1950 to 41.3 in 2000 and to 53.2 in 2050 to 36.8 years on average in the world [272, p. 38, 280]. A share of Japan reduced in the world GDP from 8.6% in 1990 up to 7.2% in 2000. According to the forecast the Japanese civilization will remain in the number of the developed regions of the world, but it will be driven back by such giants as North American, Western European and Chinese civilizations.

Two scenarios are possible for the Japanese civilization in the 21<sup>st</sup> century. One of them is a moderate growth and stagnation, a loss of a passionary push, a loss of a part of worked up markets, ousting to the 4<sup>th</sup>–5<sup>th</sup> place in the world hierarchy of powers in terms of economic might under the maintenance of a considerably high level and quality of life and high efficiency of economy, strengthening of influence of the western culture and ideology on new generations.

Another possible, but less probable scenario: Japan will get the second wind, find forces for a new passionary push, modernization of economy based on the sixth technological order, reduce the tendency towards depopulation and speed up the formation of the integral socio-cultural system to which it is close, fix its place in the world arena (at least up to the middle of the century) as the third center of power after the north American and integrated western European civilizations.

The future will show, which of the scenarios will become a reality.

***A breakthrough of the Chinese civilization.*** The 20<sup>th</sup> century was the period of ordeals for China. Revolutions and wars took a greater part of the century: the revolution of 1911, a long Japanese aggression, civil war and «cultural revolution». As a result China's GDP grew 2.4 times for 70 years (with a population growth of 2.3 times). It can be compared with the relevant figures for the world – 7.4 and 2.5 times [ibid, p. 499, 500, 505, 506]. But the Chinese people faced the ordeals and from 1978 it entered the period of a long rise. During three decades the GDP grew 9.4 times. Due to the pursued demographic policy moderate population number growth rates were reached. As a result a share of China in the world population dropped from 22.5% in 1970 to 21.5% in 2000 and it will reduce by 15.6% in the outlook for 2050.

Two scenarios of the development of the Chinese civilization in the first half of the 21<sup>st</sup> c. are taking shape. Under the maintenance of comparatively high, but less than at the end of the 20<sup>th</sup> c., GDP growth rates (6–8% average annual), by GDP output China will outstrip Western Europe approximately by 2020–2025 and the USA by 2035–2040 and it will become the most powerful economic power of the world. In the context of the active Diaspora closely connected with the motherland, especially in the countries of the Southeastern Asia and the USA, China will actually become the super power by the middle of the century competing in struggle for the world leadership with the USA. And this fact should be taken into account by other countries and civilizations. Under such scenario the return to the system of the bipolar world structure by the middle of the 21<sup>st</sup> c. should not be excluded.

Another scenario is less optimistic. Under the conditions of globalization according to the western model the positions of China may be partially undermined on the world markets, the economic growth rates will drop by 3–4% a year that will reduce the opportunity for

modernization of fixed capital obsolete in many ways and assimilation of the sixth technological order. The regularity of cyclical dynamics of economy will take effect interrupted by regular economic crises synchronized with the crisis declines in the world economy. This may intensify the expansionist tendencies of China in struggle for new markets and spheres of influence.

However, under any scenario the role of the Chinese civilization will increase in the geopolitical, geoeconomic and geocultural space, it will become one of the main actors in the world civilizational arena.

***The awakening of the Indian civilization.*** After India got independence, it went through uneasy times of dissociation, division of its territory between the Indian and Moslem civilizations. Population grew at high rates and increased for 50 years exceeding 1 bln. people by the end of the century (16.8% of the world population) with a high density of population. By 2050 according to the UN's medium forecast the population number in India will reach 1,531 mln. people – 17.2% of the world population. According to the forecast of the Institute of World Economy and International Relations of the Russian Academy of Sciences (IMEMO RAN), India will rise up to 5.5% of the world GDP in 2015 occupying the fifth place after the North American, Western European, Moslem and Japanese civilizations [130].

In the outlook for the 21<sup>st</sup> c. two scenarios of the development of the Indian civilization are possible. A favorable scenario is in consolidation of tendencies of the priority economic growth under a slowing down of the population increase rates. This will permit to improve considerably the level of life of population which remains extremely low. In 2002, according to the World Bank figures, GNP made only USD 450 per capita in India (161 place in the world) – 11 times lower than the world average level and 75 times lower than in the USA; a share of population with income less than USD 1 (international poverty line) made 34.7, less than USD 2 – 80%, the implementation of the optimistic scenario will enable to bridge sharply the poverty, increase the activity of population, speed up the rates of economic and social development. The Indian civilization will occupy a worthy place in the family of local civilizations of the fifth generation resting on the ancient traditions and it will successfully oppose the unifying tendencies of globalization.

However, one should not also exclude another pessimistic scenario of development of events. It is connected with the aggrava-

tion of cross-civilizational conflicts on the overpeopled Hindustan Peninsula, including a military clash with the Moslem civilization (Pakistan). This will lead to a considerable diversion of the funds for the needs of defense, and in the event of the clash – a disruption of a part of economy. Under such scenario India will remain long in the less developed civilizations, and in the event of a protracted destructive war with the use of nuclear weapons it may be thrown back for decades. This scenario is not very probable, but it should not be excluded from consideration in order to cool the hottest heads.

***The intricate path of the Moslem civilization.*** The Moslem civilization entered the 21<sup>st</sup> century in a quite active and contradictory state of passionary push. It occupies the third place by the population number under its priority growth rates (a share of the population number grew from 10.4% in 1950 to 14.5% in 2000), the fourth place in the world by the GDP output and remarkable for the high rates of its growth (a share in the world GDP grew from 6.1% in 1950 and 5.1% in 1960 up to 8.8% in 2000 – under the growth for a half of the century in 8.5 times in comparable prices). This civilization is remarkable for its high heterogeneity including about 40 countries with a various level of economic and social development. It features a number of oil producing countries with a high level of GDP per capita, and the countries with income much lower than the world average level (for instance, Bangladesh – in 13.5 times, Pakistan – in 12.2 times).

Today the Moslem civilization is one of the most aggressive civilizations. It is due to several reasons. **First**, the rates of the population growth are higher than the rates of economic growth, which induces the leaders to seek actively the ways-out of the deadlock. They include the repartioning of the old and seizing of new territories, taking away wealth from the countries which are poorer or richer. **Second**, Islam is the prevailing religion here and it cultivates in its followers a high spirit of collectivism, self-sacrifice for the sake of common objectives, religious fanaticism and extremism find a favorable soil here. On the boundaries of the rift with other civilizations conflicts often arise. **Third**, the dispersion of Moslem countries by various continents, a high level of penetration into other civilizations under (the maintenance of their own identity), diffusion and intensification of Islam in Western European, Eurasian, North American civilizations become the source of numerous conflicts on national and religious grounds.

It should also be taken into account that there is no recognized leader among the Moslem countries, and Islam does not imply (unlike Catholicism) a single religious center (Saudi Arabia tries to perform such function to a certain extent).

In the outlook of the first half of the 21<sup>st</sup> century several scenarios of the future of the Moslem civilization are taking shape.

The *inertia-based* scenario will be realized in case of the maintenance of the present state of the unstable balance under the priority world average rates of the population growth (an increase of the share of population in the world from 17.5% in 1998 to 19–20% in 2050) and GDP (an increase of the share in the world GDP from 8.3% in 2000 to 9.3% in 2015 — according to the IMEMO RAN's forecast) while a gap in the level of socio-economic development of the rich and poor Moslem countries remains. In such case, some countries and strata of population will remain a nutrient medium for the arising conflicts and international terrorism.

The *pessimistic* scenario is in the aggravation of a threat of the clash among civilization on such soil and the implementation of this threat in a number of local cross-civilizational conflicts (Israeli-Palestinian, Indian-Pakistan, Balkan, Transcaucasia, North Caucasia, Afghan etc.). This will slow down the growth rates of the countries of the Moslem civilization, and at the worst the military clash among civilization (with the use of modern weapons including nuclear) could throw them back, and even to create a threat for survival of all humankind. However, in the nearest decades under the NATO military superiority and preservation of the anti-terrorist coalition, such outlook is highly unlikely.

The *optimistic scenario* is that the countries of moderate Islam and its peaceful wing will overcome a danger of international terrorism and a clash among civilizations and direct a remaining passionate push for rendering support to the poorest Moslem countries in order to support their poorer «sisters» in civilization and ensure the leveling of the level of development with them. The development of dialogue and partnership among civilizations in the solution of urgent global problems, formation of the multi-polar world, assistance of the richest civilizations will promote the implementation of such scenario that has chances to success although fewer than the first scenario. A change of generation may play a positive role here.

***The tragic fate of the Eurasian civilization.*** The only civilization that has met the 21<sup>st</sup> century in the state of disintegration and retrogradation is the Eurasian civilization, which was represented

by the Soviet Union in the 20<sup>th</sup> century — a successor to the Russian Empire.

The Eurasian civilization is mixed by its nature. Along with its historical Orthodox core (Russians, Ukrainians, Byelorussians, Armenians and Georgians), it includes considerable elements of Moslem population (Azerbaijanians, Kazakhs, Tadjiks, Turkmans, Uzbeks, Kirghizs, Tartars, Bashkirs, Dagestanians, Ingushs and Chechens), bearers of Western European culture (the peoples of the Baltic), Buddhist population (Buryats, Kalmucks and Tuvins). After the Baltic states got independence, they together with the countries of Eastern Europe gravitated to the Western European civilization. Therefore in the 21<sup>st</sup> c. the fate of the Eurasian civilization may be considered within the CIS. However, the centrifugal forces still prevail here, especially after the events of September 11, 2000, the «Revolution of Roses» in Georgia and «Orange Revolution» in Ukraine when the influence of the USA increased considerably in a number of the CIS states, and the NATO influence zone came nigh unto the southern borders of Russia. In fact, it is possible to speak with confidence only about the Russian civilization at the beginning of the century.

The *launching positions* for the Eurasian civilization (and the Russian as its core) are at present extremely unfavorable.

In the demographic field the period of a comparatively high growth rates of CIS population (from 174 mln. in 1950 to 282 mln. in 2000 — 62% for half a century) was replaced by the period of stagnation and beginning of the tendency to depopulation. There is the decline in the population number, according to the UN's medium forecast, up to 237 in 2050 (decrease by 16% mln.); a share of the world population will decrease from 6.9% in 1950 to 4.6% in 2000 and by 2.4% in 2050. However, various tendencies are observed in three groups of the CIS countries. The population number of the first group (Russia, Ukraine and Byelorussia) will reduce from 205 mln. people in 2000 to 141 mln. in 2050 — by 34% (including in Russia — from 146 to 101.5 mln.), a share of the CIS population number — from 73% to 59%. The reverse tendency is observed in the countries where the Moslem population prevails. The population number in Uzbekistan, Kazakhstan, Tadjikistan, Turkmenistan, Kirghizia and Azerbaijan grew in 3.1 times from 1950 to 2000 (from 16.1 to 64.3 mln. persons) and continues growing in the first half of the 21<sup>st</sup> c. — up to 86.4 mln. in 2050. A share of this group of countries in the CIS population number grew from 9.3% in 1950 to 29%

in 2000 and will reach 35% by 2050. In the third group of countries (Armenia, Georgia, and Moldova) a moderate drop will be observed, and it will practically stabilize for the total population number in the CIS (4.5% in 2000, 3.6% in 2050). At the beginning of the 21<sup>st</sup> c. in CIS countries high economic growth rates and increase in the real income of population are observed.

The decline or stabilization in the mean anticipated life span, high level of sick and morbidity rate, a relatively low life level after its sharp fall in the 90s, many time increase of economic stratification, social stratification between a narrow stratum of the new rich and majority often beyond the poverty line should be included in the number of the prevailing tendencies.

The *technological and economic field* suffered a serious if not an irretrievable damage in the 90s. Technological degradation of economy prevailed, ousting of the fifth and partially the fourth technological orders (under a considerable increase in the share of the third and especially of the relict orders). Washing out of science-intensive products, a loss of competitiveness of agricultural products and manufacturing industries and its replacement with the import products took place. As a result of privatization the most valuable property, which was accumulated through hard labor of numerous generations, was transferred nearly for a song to private hands of new owners, who are interested in their own momentary profit and not in the prosperity of the country. There was a sharp fall in the share of state order, in the efficiency of economy and its role in the world economic space. From 1950 to 1960 a share of the former USSR grew from 11.1 to 14.5% in the world GDP, and then it began to drop at the increasing rate — 13.2% in 1970, 11.7% in 1980, 9.2% in 1990, and in the 90s it dropped rapidly — to 4.1% in 2000. The consequent indices for Russia are 7.0% in 1950, 8.9% in 1960, 5.6% in 1990 and 2.1% in 2000. From 1999 the revival of economy began in the CIS countries, in 2000 record rates of economic growth were attained and outstripped the world average further. In all CIS countries fixed capital has aged considerably and was not renewed practically for a long time, an underloading of productive capacities grew high; a level of investment and innovations has dropped many times. A private capitalist order formed at lightning speed and turned out low efficient and parasitic to a greater extent, a large part of economy got under control of Mafiosi structures, foreign capital and TNC.

In the *state-political field*, under the development of democracy and easing of the influence of the state a tendency to the establish-

ment of authoritarian regimes has intensified in some countries. In all countries the intensification of corruption, increased bureaucratic machinery under a low responsibility for final outputs of its activity is observed. Attempts to consolidate the state-political union and civilization unity within CIS were not crowned with success. A number of narrower unions — the union Russia-Belarus, Eurasian economic community, a link Uzbekistan-Ukraine-Georgia-Moldova emerged. Political ties between the CIS countries weakened, their influence reduced considerably in the geopolitical arena.

In the *social sphere*, considerable losses are observed. Allocations of the state and industry for science were reduced many times, and the number of research staff, many talented scientists moved abroad. The state support of culture, education and health care service reduced. A wave of crime, narcotism, alcoholism, prostitution and dissolution of morals is observed.

***One of the three possible scenarios may be realized for the development of the Eurasian civilization for the first half of the 21<sup>st</sup> century.***

*Pessimistic scenario.* Disintegration of the Eurasian civilization and the disintegration of the CIS within one-two near decades. Smaller formations (union Russia-Belarus, Eurasian economic commonwealth, Central Asian Union) might persist in this space, which are under the increasing influence of both western and eastern civilizations.

The worst case of the implementation of the pessimistic scenario would be disintegration of Russia, which was forecasted by a famous Italian journalist, **Giulietto Chiesa**, in the book under the symbolic title «Farewell, Russia!»: «The decline and disintegration which the Russians promoted by their laziness and stupid imitation of foreign examples have just begun. A loss of Central Asia will be followed by a loss of the Caucasus. And then the Russians will give up Siberia, the strongest of “Asian tigers” will suppress it. This will occur as a matter of fact as Russia is doing harakiri before the eyes of Asia, and a colossal demographic pressure of the Chinese will not be kept back by anything soon» [106, p. 257–258].

**Zbigniew Brzezinski**, American politologist, a former US Secretary of the State, believes that a division of Russia into three sovereign states is most desirable (for the West, of course): «It would be easier for Russia formed according to the principle of free confederation, which would include the European part of Russia, Siberian Republic and Far Eastern Republic, to develop closer eco-

conomic ties with Europe, with new states of Central Asia and the East» [17, p. 240]. However, a disintegration of Russia would mean a final disappearance of the Eurasian civilization from the historical arena.

In view of the revival that has already begun economy of Russia, strengthening of the vertical of power and relaxing the centrifugal forces the scenario that Russia will disintegrate should be viewed as highly improbable.

The *inertia-based scenario* («scenario of vegetation» has much more chances to be implemented. Not only the common historical past and socio-cultural ties of peoples endorse the maintenance of the CIS, but also vital economic and geopolitical interests of the CIS countries. Only through uniting their efforts they may improve the competitiveness of their economy, oppose a powerful pressure of TNC under the conditions of globalization, and to strengthen existing and develop new niches on the world market. However, the awareness and implementation of such commonness under such scenario will have its limits, and meet with mercenary interests of local oligarch and comprador groups and short-sighted political elites, seeking to maintain its influence, and also a strong economic and political influence from the West. Therefore the state of the present unstable balance will remain, fluctuation and struggle of centrifugal and centripetal forces under the continuing loss of international influence will continue as it loses its military and energy element as a result of going out of a considerable part of military-technological systems slowly renewed and depletion of reserves of fossil fuel. In the more remote future it may be ended with a transition to the pessimistic scenario.

The *optimistic scenario* is in the outlook of the revival of the Eurasian civilization and Russia as its core in the near 2–3 decades. Historical experience endorses such scenario: Russia found itself three times in the state of national catastrophe for its millennium history and got out of it renewed and even stronger (the matter in question is the Mongolian invasion, Time of Troubles and Civil War of the beginning of the 20<sup>th</sup> c.). According to **A. Toynbee**, a challenge of the period causes the response of civilization. The awareness of the future death of civilization, responsibility to the future generations gives rise to new forces and opportunities. But a change of generations of politicians, business and intellectual elite, revival of a passionate push, elaboration and implementation of the strategy of an innovative breakthrough, priority of integral tendencies, and civi-

lizational identification in opposing the unifying tendencies of western model of life style will be necessary for that.

The outlooks of the revival of the Eurasian civilizations are viewed as highly improbable now, but they have real preconditions. This is, first of all, the socio-cultural commonness, a high level of science, culture and education still maintained that has a paramount significance for the post-industrial society. It is sufficiently complete support with the major types of natural resources, which have not only national, but world significance. It is the need of joint actions on the world markets in order to survive in the competitive struggle. This is the commonness of geopolitical and military-strategic interests in the face of a threat of the clash among civilizations and international terrorism.

However, a lot of obstacles have to be overcome on the path to the implementation of the optimistic scenario. This is, first of all, a lack of a well-elaborated strategy of the revival of the Eurasian civilization, weakness and disunity of political forces and social movements struggling for the pursuance of this strategy, incompetence, strategic shortsightedness and self-interest of political and business elite and, finally, a growing political and economic pressure from the outside of countries and civilizations opposing the revival of Eurasian civilization. A lot of efforts will be necessary, change of one-two generations (and in the crucial periods the change rate of generations speeds up) so that the optimistic scenario could be implemented.

***Latin American civilization.*** This civilization is one of the youngest: it was formed a couple of centuries ago on the base of Spanish and Portuguese colonies in South and Central America. Although conflicts and wars went on long between young states, they were getting more and more aware of their civilizational commonness.

This civilization was formed of three quite heterogeneous elements: the remains of aboriginal tribes (stronger than in North America) – descendants of the ancient American civilizations of Incas, Mayas and Aztecs; the emigrants from Western Europe, first of all Spain and Portugal, who conquered them; the descendants of Africans – slaves relocated from Africa by force. Quite considerable strata of metises, mulattos and Creoles are the fruit of cross-civilizational amalgamation.

Latin America has quite considerable and fast growing population. Its share in the world population rose from 6.2% in 1950 to

8.5% in 2000 and will be increasing in the period before 2050 at the priority rates (reaching 760 mln. people) according to the UN's forecast — 8.6% of the world population. And economy grows at the priority rates: the GDP output increased 7.3 times for a half of the century, and its share rose from 6.4 to 7.6% in the world GDP. According to the IMEMO RAN's forecast this tendency will persist also at the beginning of the century, so its share will reach 8% by 2015. In terms of the level of economic development Latin America is somewhat lower than the world average level (in 2002, according to the World Bank, GNP made USD 3,280 per capita — 64% of the average world indicator).

Most of the countries of Latin America have necessary preconditions for sustainable economic growth and maintenance of cultural diversity in the 21<sup>st</sup> century. Therefore the scenarios of development of this civilization may be different by the rates of economic development in the near decades, which depends on the dynamics of conjuncture of the world economy with which these countries are closely connected. Fortunately, the clash among civilizations, big military conflicts should not be expected in this region of the world.

*The Oceanic civilization* is included in the number of being formed nowadays. It includes the developed core — a former part of the western civilization (the British Empire) — Australia and New Zealand and young states of Polynesia, Micronesia and Melanesia which have gained independence recently, and are lagging considerably in economic aspect and are often at the pre-industrial stage of development.

Australia and New Zealand occupy an inconsiderable specific weight in the world population number — totally about 0.4%; a share in the world GDP is approximately three times higher — 1.2%. According to the GNP per capita in 2003 Australia outstripped 5.1 times the average world level, New Zealand — 2.6 times. However, the island states of Oceania are on the low level of development. For instance, Papua New Guinea (with 5 mln. population — more than in New Zealand by 1 mln.) had USD 530 GDP per capita — 9.7 times lower than the world average. These are the countries with the high rate of population increase so according to the UN's medium demographic forecast the population will increase by 54% to 2050 in general for Oceania and numbers 47.6 bln. of people, i.e. 0.5% of world population (in Australia and New Zealand — by 43%).

An important problem of the development of Oceanic civilization is the bridging of a cross-civilizational gap in the level of economic and social development. It must happen under the leading role and responsibility of Australia. It may serve as a model for the solution of a similar problem in general for the world civilization of the 21<sup>st</sup> century. If the gap persists or even increases, it will mean that the pessimistic scenario prevailed.

The *African civilization* (south to the Sahara) goes through the formation and is in a more complicated situation among civilizations of the fifth generation. It is caused by the highest increase rates of population with simultaneous falling of GDP per capita. The share of this civilization in the world population number grew from 6.2% in 1950 to 10.6% in 2000 and it will continue growing up to 18.6% by 2050 in the first half of the 21<sup>st</sup> c. and the growth of population number will be 2.5 times. At the same time its share in the world GDP is falling from 3.4% in 1950 to 2.4% in 2000 and according to the IMEMO RAN' forecast to 2.1% in 2015.

In many African countries the level of life is record low. In general the GNP per capita is 11.4 times lower than the world average in the African civilization, and in Ethiopia (population 67 mln. people), Nigeria (135 mln. people) — in 15.7 times. Admittedly, this indicator is 5.6 times higher than average for the African civilization in South Africa, but it is twice lower than the world average. In many African countries the level of illiteracy is high, the scientific-technological potential is extremely low; the resources for the development are extremely limited.

Apparently, the African civilization won't be able to bridge a growing gap from the world level by its own efforts and begin to build the post-industrial society. However, it is quite dangerous for the future of all humankind to leave the civilization in its modern beggarly or half beggarly state ( 540 mln. people lived in Africa in 2000, and will number 1,557 mln. people by 2050).

The solution of the development-related problem of the African civilization, bringing it closer to the world average level is one of the central problems of the 21<sup>st</sup> century. Under the optimistic scenario if the resources of developed civilizations can be pooled, this gap may be reduced 2-3 times by 2050. Under the pessimistic scenario — a gap may even increase in the second half of the century. This is a kind of a touchstone on which the efficiency of globalization will be tested, the ability of civilizations of the fifth generation to mutual support and partnership.

### **14.4.4. Scenario of Interaction among Civilizations in the 21<sup>st</sup> Century**

In the 21<sup>st</sup> century the problem of interaction among local civilizations acquires a key, axial significance not only for their further fate, but for the future of all humankind, survival and development of the Homo sapiens species themselves.

This is connected with the *historical rift*, change of periods as a result of:

➡ a transition from the industrial world civilization that prevailed during more than two centuries to post-industrial, the distinguishing features of which have not established themselves yet, confronting its various variants; the old world is in agony and tries to adjust itself to existing in new conditions;

➡ a replacement of the sensual socio-cultural system that prevailed during five centuries in the West and the ideational socio-cultural system inherent to civilizations of the East with the integral system harmoniously combining positive features of this and that system; this replacement is likely to take nearly all space of the 21<sup>st</sup> century and to be connected with the change in the system of values;

➡ a speeding up process of globalization and confrontation of its two variants. One is aimed at unifying westernization of the world with the dissolution of civilizations. The other implies maintaining and intensifying the distinctions of local civilizations of the fifth generation and their partnership.

The following *scenarios of interaction among civilizations in the 21<sup>st</sup> century* are possible:

➡ scenario of the *clash between civilizations* on the lines of civilizational rifts is extremely unfavorable that might finally lead to self-destruction of humankind;

➡ scenario of the *dissolution of civilization* in the global super society;

➡ *optimistic scenario of the dialogue and partnership* of civilizations of the fifth generation in solution of long-felt problems in ensuring of sustainable development on the world scale.

Let's dwell on each of these scenarios and their possible consequences.

*The clash of civilizations scenario* was first analyzed in detail by **S. Huntington** [259] and has objective and subjective preconditions

for its implementation under conditions of an increasing gap between the rich and poor civilizations. But a growing awareness that such clash is fatal for humankind opposes the implementation of this scenario in the form of a large-scale armed clash among civilizations.

The clashes of civilizations on the local level are already going on, they find their expression in a number of armed conflicts in the Middle East, Balkans, Afghanistan, Iraq, Transcaucasia and the Hindustan peninsula as well as the acts of international terrorism. The international community has succeeded to this day to suppress these dangerous seats at greater or smaller cost, preventing their transformation into a global clash among civilizations. Under today's ratio of forces in the geopolitical arena the scenario of a large-scale clash among civilizations in the near decades appears highly unlikely. However, in the long view under an essential change in the ratio of forces this danger may increase again if its objective foundation — an increasing gap between the rich minority and the poor majority of countries and civilizations on the planet isn't surmounted through joint efforts.

***The scenario of dissolution of civilizations*** in the global super society is best-defined by Russian philosopher **A.A. Zinoviev**. He proceeds from the following logic: «Civilization is a historical phenomenon: it emerges, lives, improves, changes and dies. It emerges and lives under certain conditions. The emergence of civilizations in the past was not an absolute necessity. Not any assemblage of people was able to create or maintain civilizations... The remaining civilizations, including western European are doomed to disappearance. New phenomena of other kind will replace them, more adequate to modern conditions on the planet... In the second half of our century the most considerable western European civilization in the history of humankind began to be absorbed by a social organization of a higher level — the union of western countries in single supranational blocs, single supranational super societies, in the global super society. Time of civilizations has passed» [165, p. 20–21].

A threat of dissolution of civilizations in the global super society has objective roots in the modern neo-liberal model of globalization. It has unifying impact on the civilizational systems of values and the dominance of the West in economic, technological, political, information and ideological geofields of the beginning of the 21<sup>st</sup> century. If these tendencies persist and develop in the coming decades, then a danger of dissolution of civilizations in the global super society may be viewed as a probable one.

However, powerful forces, historical experience accumulated for five millennia oppose this scenario. Local civilizations, some of which has historical roots of great depth, oppose it having recognized danger. It becomes increasingly obvious that the overcoming of the civilizational, national, and social diversity is as detrimental to humankind as a loss of biodiversity for the animate nature. The viability of the system is determined by the diversity of elements making it, a loss of such diversity leads to a loss of viability, degeneration and finally to the death.

The formation of the fifth generation of local civilizations, which is different by its greater differentiation in comparison with the industrial period, is a response to challenges of globalization and unification. It may be anticipated that in the 21<sup>st</sup> c. the civilizational-cultural diversity will not weaken, but on the contrary it will intensify, although it will assume the updated forms in many ways under the influence of the developing tendency towards dialogue and partnership among civilizations in the solution of new problems and threats arising before humankind in the present century.

***The dialogue and partnership among civilizations scenario.*** The dialogue and cooperation of local civilizations is not a new phenomenon. It has existed as long as civilizations themselves, intensifying and modernizing from period to period, from one world civilization to other. In the 21<sup>st</sup> c. the dialogue and cooperation among civilizations acquire new features and specifics, and modify.

**First**, *the dialogue and cooperation among civilizations have only one alternative — their clash* which might finally lead to disappearance of human race from the planet. Such outlook has never arisen before in the interaction among civilizations. The aspiration for self-preservation of humankind makes the dialogue and partnership among civilizations a long-term strategic global imperative.

**Second**, *globalization, in its present model, threatens the existence of civilizations, on the other hand — it makes possible its dissolution in the global super society modified according to the western model.* This threat intensifies the efforts of local civilizations of the fifth generations to self-preservation that is a common field for the interaction among civilizations.

**Third**, *the opportunities for dialogue and cooperation among civilizations have never been so ample and all-pervading before*, there was no such vast field of global problems that are possible to solve only together. The matter in question is the world information field (telecommunications and Internet), an increasingly powerful

migration flows and free movement of people and capitals, common ecological and socio-cultural problems and many other entwinements forming a close texture of cross-civilizational relations in space of the single global civilization. This was noted by **Kofi Annan**, UN Secretary-General: «What this history should teach us also is that, alongside an infinite diversity of cultures, there does exist one, global civilization based on shared values of tolerance and freedom. It is a civilization defined by its tolerance of dissent, its celebration of cultural diversity, its insistence on fundamental, universal human rights, and its belief in the right of people everywhere to have a say in how they are governed. It is this global civilization that we are called on to defend and promote as we embark on a new century».

Therefore the implementation of the dialogue and partnership among civilizations scenario in the 21<sup>st</sup> century appears not only highly desirable, but also quite probable and absolutely correct. However, this process won't be fast and easy, it will take not one decade within which conflicts will continue on civilizational rifts, which are found not only on the state boundaries, but often inside the countries. The change of one-two generations will be necessary before the dialogue among civilizations will become recognized and prevailing form of their relations. The implementation of the action plan outlined by UN General Assembly Resolution No 56/6 dated 9.11.2001 «Global Agenda for Dialogue among Civilizations» will promote this: «Dialogue among civilizations is a process between and within civilizations, founded on inclusion, and a collective desire to learn, uncover and examine assumptions, unfold shared meaning and core values and integrate multiple perspectives through dialogue. Participation in dialogue among civilizations shall be global in scope and shall be open to all».

**The total of transformations.** The view on the future of civilizations expounded in this chapter shows that in the present century they are going to have the transformation of great depth predetermined by a transition to the third historical super cycle in the dynamics of the global civilization, formation of the post-industrial humanistically noospheric world civilization and the fifth, more differentiated generation of local civilizations. Therefore the 21<sup>st</sup> century is the century of hectic, sometimes chaotic changes, ruining of the primary foundations of society, whose new outlines have not yet gained perspective to the end. The beginning for such changes was laid in the last decades of the 20<sup>th</sup> c.

*Table 14.1* presents the key scheme of the optimistic scenario of civilizational transformations for a century and a half – from the last quarter of the 20<sup>th</sup> c. to the first quarter of the 22<sup>nd</sup> c. inclusive. It may be viewed as the period of transition to the third historical super cycle, formation and diffusion of the post-industrial world civilization and the fifth generation of local civilizations.

We divide this period into three semi-century long-term cycles:

➔ the middle of the 70s of the 20<sup>th</sup> c. – middle of the 20s of the 21<sup>st</sup> c. (the 5<sup>th</sup> Kondratieff cycle) – the crisis of the industrial civilization of the fourth generation of local civilizations and the germination of the post-industrial civilization and a new generation of local civilizations; this is the most difficult and painful period fraught with upheavals, threats and conflicts;

➔ the middle of the 20s – beginning of the 70s of the 21<sup>st</sup> c. (the 6<sup>th</sup> Kondratieff cycle) – the period of spread, formation of the post industrial civilization and a new generation of local civilizations, their spread from the epicenter to the periphery, more clear-cut manifestation of their distinctive features and advantages, implementation of the humanistically noospheric principles of the way of life and a model of civilization adequate to it;

➔ the middle of the 70s of the 21<sup>st</sup> c. – middle of the 20s of the 22<sup>nd</sup> c. – reaching the maturity phase by the post-industrial world civilization and the fifth generation of local civilizations, ensuring their partnership and slowing down of the changes rates.

Obviously, the suggested scheme is only one of the scenarios of the future geocivilizational development, and the optimistic scenario that does not exclude other scenarios – pessimistic and intermediary, the blackest of them – self-destruction of humankind as a result of the clash among civilizations or a global catastrophe.

Also, the scheme shows possible radical changes in the major spheres making the genotype of civilization: demographic, natural-ecological, innovative-technological, economic, socio-political and spiritual life. Both the depth of occurring transformations in each of the spheres (more detailed contents of such transformations have been addressed above in § 14.3.) and their comparative synchronization by long-term cycles are obvious from the scheme.

The total of these transformations (under the optimistic scenario) is that the civilizational humankind will be able to respond to the challenges of the 21<sup>st</sup> century and get out of it innovatively renewed, full of force and vigor for a new whorl of the historical spiral, for a complete implementation of its civilizational potential.

Table 14.1

**Periodization of Civilizational Transformations**

<b>Data</b>	<b>Middle of the 70s of the 20<sup>th</sup> c. middle of the 20s of the 21<sup>st</sup> c.</b>	<b>Middle of the 20s — middle of the 70s of the 21<sup>st</sup> c.</b>	<b>Beginning of the 70s of the 21<sup>st</sup> c. beginning of the 20s of the 22<sup>nd</sup> c.</b>
<i>World civilization (civilizational cycles)</i>	Crisis of industrial and germination of P/i civilizational	Spread and deepening of P/i civilization	Maturity phase of P/i civilization
<i>Kondratieff cycles</i>	5 <sup>th</sup> cycle (transitional)	6 <sup>th</sup> cycle (adequate to civilization)	7 <sup>th</sup> cycle
<i>Local civilization</i>	Crisis and completion of the 4 <sup>th</sup> generation, germination of the 5 <sup>th</sup> generation, a threat of the clash among civilizations	Spread of the fifth generation, cooperation of civilizations	Maturity of the fifth generation, partnership of civilizations
<i>Demographic sphere</i>	Decline in the population increase rates, beginning of the demographic transition	Spread of depopulation. Demographic polarization of civilizations	Stabilization of the population number, reduction of the demographic gap
<i>Nature and ecology</i>	Evolution of energy and ecological crises, growth of number of catastrophes	Energy revolution, formation of the noosphere, p/i and ecological mode of production	Establishment of noosphere and sustainable development, maturity of P/i and ecological mode of production
<i>Innovative technological development</i>	5 <sup>th</sup> TO, crisis of industrial and germination of the P/i TMP. Beginning of the wave of epochal innovations	6 <sup>th</sup> TO, spread of P/i TMP. High wave of epochal innovations	7 <sup>th</sup> TO, prevalence of the TMP, wave of base innovations
<i>Economy</i>	Economic transformations, crisis of the industrial and germination of the p/i modes of production. Strengthening of mixed economy. Evolution of globalization	Formation of the P/i mode of production, maturity of global economy, bridging of polarization of income	Maturity of the P/i mode of production, overcoming of poverty
<i>Socio-political sphere</i>	A wave of crises. Disintegration of the USSR and the world system of socialism. Tendency to the unipolar world. Terrorism. Threat of the clash between civilizations	Return to the bipolar world. Geopolitical stabilization. A Drop in terrorism	Multipolar world. Partnership of civilizations. Elimination of warfare
<i>Spiritual sphere</i>	Crisis of the sensual SCS, industrial scientific paradigm, germination of the P/i paradigm. Revolution in education. Revival of religions	Formation of the integral SCS, diffusion of the P/i scientific paradigm, rise in culture and religion	Spread of integral SCS, prevalence of the P/i paradigm

\*Abbreviations: P/i — postindustrial; TS — technologic structure; TMP — technologic mode of production; SCS — socio-cultural structure

## **Chapter 15**

# **GLOBAL CIVILIZATION: NEW CHALLENGES**



**T**he beginning of the 21<sup>st</sup> century has become the time of severe trials for global civilization as well as for the United Nations Organization, which represents this civilization and interests of all humanity. After the jubilee sessions of the UN General Assembly devoted to the embarking on the new century and the 60<sup>th</sup> anniversary of the UN passed, it became obvious that the world community is not ready yet to give adequate, efficient answers to the challenges of the new century. They include not only the insurgent wave of terrorism, but a threat of the energy and environmental catastrophe, depopulation in the growing number of civilizations, a widening gulf between rich and poor countries, and epidemics of diseases. Fundamentally new approaches and decisions relying on super long-range global forecasts, on activity of the institutes of innovative partnership should be sought while feeling a common responsibility for the future of humanity.

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## **15.1. New Challenges to the Global Civilization in the 21<sup>st</sup> Century**



**T**he present century has generated **new, unexpected threats and challenges** to the global civilization. These are the challenges of depopulation, power crisis and environmental catastrophe; deepening of technological and ecological polarization of civilizations and countries as a result of a neoliberal model of globalization; moral and cultural degradation; and finally elimination of civilizational diversity or a large-scale clash among civilizations that may end with the death of humankind, the actual end of the history. The generations of the 21<sup>st</sup> century should find an answer to these global challenges. Let's consider the essence of such challenges and possible responses thereto.

**1. Depopulation.** A population explosion was a threat to the global civilization in the second half of the 20<sup>th</sup> c.: the population number on the Earth increased 2.4 times only for a century and a half, which has caused the overpopulation and environmental overload, especially in the developing countries. In the first half of the 21<sup>st</sup> century, this threat will ease; the population on the planet will increase, according to the

UN medium variant projections, 1.5 times by 2050 (up to 9 billion people). A threat of overpopulation will persist only for African, Indian, Moslem and Latin American civilizations, although the population increase rates will slow down. But a new more frightful threat not anticipated either by Maltus or his numerous followers has arisen: **a challenge of depopulation**. More than 40 countries will be hit by it by the middle of the century, including Western European, Japanese, Eastern Slavic, and then Chinese civilizations. If this tendency persists, then the population growth on the Earth will cease, and it will return to the present level of 6 billion people by the middle of the 21<sup>st</sup> century. This may end with the degeneration and extinction of humankind in the distant future — *demographic catastrophe* — not less terrible than a global ecocatastrophe.

But the matter is not only in the number, but also in the quality of the population on the Earth. Under reduction in the birth rate and a growth of an average life span, population is aging; a growth of the share of population in the old age requires support from society, a reduction in the share of employable and innovatively active population. A civilizational and racial structure of population will change: a share of civilizations of Asia, Africa, Latin America will increase considerably, and a share of Europe and North America will drop, especially the white race. The migration flows from the East and the South to the North and the West will intensify; many local civilizations will assume a mixed nature that will aggravate cross-civilizational and intra-civilizational contradictions.

The global civilizations may respond to such depopulation challenge (which also occurred earlier at the decay stages of civilizations) with elaboration and consistent pursuance of an **active differentiated demographic policy**. It will contribute to the restraining of the population growth rates in the overpopulated countries and encourage the birthrates and increase in the number of families in the countries and civilizations hit with depopulation. Religions and public morality, movement of the global civil society in support of the reproductive instinct, responsibility for the future generations may play not a small role in overcoming such depopulation. In this case, it is possible to surmount a threatening tendency towards depopulation, keep moderate growth rates of the number and innovative activity of the Earth residents by the end of the 21<sup>st</sup> c. and for a further outlook.

**2. Power crisis and worsening of the climate on the Earth.** This challenge is more and more taking shape already at the beginning of

the 21<sup>st</sup> c. Fossil fuel depleting and rapidly becoming more and more expensive and polluting heavily the environment, thus causing unfavorable climate changes, remains the base underlying a fast growth of power consumption. The number of natural-environmental catastrophes is growing. Humankind has already reached a new power and ecological threshold; none of civilizations or countries will remain outside of these changes. A power and ecological imperative is becoming a vitally significant matter for survival of the global civilization.

*A strategy for sustainable development* adopted in Rio-de-Janeiro in 1992 and reaffirmed in Johannesburg in 2002 is already not enough to give a worthy response to such challenge. It will be required to elaborate a long-term — at least up to the middle of the century — *global power and ecological strategy* aimed at a considerable replacement of fossil fuel with renewable sources of power (first of all with hydrogen and fuel elements), a sharp decrease in heat pollution of the planet, establishment of the global system of ecomonitoring, forecasting of natural and environmental catastrophes. It will permit to change the structure of the world balance of power by the end of the century. One of the scenarios for such change is suggested by the International Energy Agency at the summit in Johannesburg in 2002. National hydrogen plans approved in the European Union, Japan and the USA, and the activities evolving in this direction in Russia, China and other countries show the feasibility of this way. At the summit of G8 in July 2006 in Saint Petersburg the specific ways are likely to be suggested for international cooperation in this field.

**3. Polarization of technological and economic level in the development of countries and civilizations, an abyss between the rich minority and the poor majority of the population on the planet.** The industrial revolution, colonial system, increase in the gap in the level of technological development and income in the countries and civilizations in the 19<sup>th</sup>–20<sup>th</sup> cc., a technological overturn evolving at the beginning of the 21<sup>st</sup> c. and associated with the assimilation and diffusion of the sixth technological order, globalization oriented at a self-serving use by TNC will aggravate such polarization, a division of the global civilization into a few rich and many poor countries and civilizations. On the one hand, the globalization processes are pooling the world economy and technology into the integral system; on the other hand, a gap between its separate parts

as if living in different epochs and that has reached a dangerous level is fraught with explosion of this system, aggravates the threat of a global social conflict.

Examples of China, India, Brazil and new industrial countries of Asia demonstrate that the backwardness and poverty may be overcome on the basis of an innovative breakthrough during a life period of one generation. But such breakthrough is far from possible for all countries.

***The urgent task of the agenda for the 21<sup>st</sup> century is to work out a global innovative-technological and economic strategy,*** which would allow to unite the resources of the richest, most technologically vanguard countries in order to bring up the lagging countries to the present level of development, a transfer of advanced technologies to them, training of the staff, bridging an extreme gap between rich and poor sections of population, creating tens of millions of efficient jobs in order to diminish motivation of locals to emigrate to the rich states.

**4. A threat of the clash among civilizations and terrorism.** In the first half of the 21<sup>st</sup> c. a threat of the clash among civilizations and a wave of terrorism that have hit many countries are coming to the forefront. Local conflicts and terrorist attacks often become local and pinpoint forms of the clash among civilizations. The attempts to respond to such dangerous tendencies using methods of violence, anti-terrorist coalitions, establishment of a global dictate of one super power do not give tangible results. The countries are frozen with terror; families lose their feeling of safety. One should combat the causes, and not the consequences, poverty, disregard of national and civilizational interests. ***The future is with the multipolar world*** based on the dialogue, cooperation and partnership of equal civilizations, although unequal in technological, economic and military respects.

The UN General Assembly adopted the global Agenda for the dialogue among civilizations on November 9, 2001. Now Spain and Turkey supported by Russia and other countries have launched a recent initiative to establish ***an alliance of civilizations***. The concept for ensuring global sustainable development and solution of global problems based on the dialogue and partnership among civilizations was adopted at the 4<sup>th</sup> International Kondratieff Conference in Moscow. A transition from the confrontation of civilizations to their dialogue and partnership is a significant condition

for the preservation and development of the global civilization; under a large-scale clash its days may be numbered.

**5. Degradation of the socio-cultural system and a threat to the civilizational diversity.** The condition of survivability and progress of any system both natural and social is in the diversity and balanced interaction among its elements. In the 21<sup>st</sup> century a threat has taken shape to the civilizational and cultural diversity of humankind, global civilization. A decaying sensible socio-cultural system prevailing in the West and ethics inherent to it using powerful information channels are forced upon other civilizations, especially the youth. The industrial scientific paradigm has outdated in many ways and is not able to explain the radical changes taking place in society and foresee its future course, and sometimes the achievements of science become dangerous to humankind. Education is being pragmatized, is losing its fundamentality and creativity, filled up with obsolete dogmas and mechanical skills. It restricts the establishment of a knowledge-based society and undermines the innovative-ability. Culture becomes petty and commercialized, is losing its cultural diversity. Ethic rules accumulated within millennia are emasculating, the Renaissance of religions is unable to counteract it. The ideals of violence are being diffused, human life is devaluating. ***The need is felt to unite the intellectuals, men of culture, education, religions of all civilizations so that to foster the establishment of an integral socio-cultural system,*** which has been forecasted by **Pitirim Sorokin**, development of a new scientific revolution and its assimilation by new generations through the system of continuous creative education, humanization of information flows (Internet and telecommunication systems) under control of the global civil society.

## **15.2. On the Path to the World Confederation of States and Civilizations**

The challenges unprecedented in strength and danger that the global civilization has faced at the threshold of the 21<sup>st</sup> century, the need to work out and implement the responses adequate in scale, depth and efficiency to these challenges indicates ***a pressing need for humankind to elaborate and implement as soon as possible new institutional forms of self-development and self-governance.***

The quests for such new institutes have been underway for a long time. Already at the beginning of the 30s **Herbert Wells** set forth the idea to establish the World Federative State vested with large powers, but he also observed that this idea would take long and difficult to implement [204]. In the period when the UNO was formed **Albert Einstein** and **Arnold Toynbee** advocated the idea of establishing the World Government. The leaders of the states of the Anti-Hitler coalition agreed to establish the UNO as the world representative organization, which is able to prevent a new world war, settle arising conflicts and maintain the development of all mankind. For six decades of its existence the UNO and its organizations have mainly fulfilled their functions and transformed into the universal global body for cooperation of nearly all countries and civilizations.

However, *the present powers and structure of the UNO do not already meet the complexity, long-term nature and scale of the challenges of the 21<sup>st</sup> c.*, a present-day state and outlooks for the development of the global civilization. It would be a fundamentally incorrect to turn down the UNO or establish a new global inter-state organization in parallel with it. The UNO has really become the world forum for dialogue and interaction among the states and civilizations; despite all complexities and contradictions, the settlement of the most sophisticated geopolitical, economic, environmental and socio-cultural problems is ensured through it. But this unique organization can't continue without radical transformations being confined to the increase in the number of the Security Council members and change in the name of certain bodies as experience of the anniversary UN session of 2005 has demonstrated, is ineffective and even dangerous: a ship of the world organization could fail to endure a load of new problems.

Apparently, another path should be taken. *The morphological structure of any organization is determined by its functional structure*, those functions that it should perform in the changed conditions. From our viewpoint, one should begin with the **elaboration of a long-range forecast of development of the global civilization by 2050 and based on it the strategy (or the concept) for transformation of the UNO and other institutes of functioning and development of such civilization.**

It is a matter of science to work out long-range forecasts. In the report of the group of scientists «Crossing the Divide. Dialogue among Civilizations» discussed at the UN General Assembly in November 2001 it was stressed that the scientists could stand first in

the activities of this world organization. There is already an experience of a long-range forecasting activity within the UNO. In the 70s the UN Secretariat applied three global models for such purposes, where the cross-sectoral model of the world economy of the Nobel Prize Winner in economy **Vassily Leontieff** was applied to elaborate a long-range forecast of development of the world economy (by 2000). In 2006 it will be 100 years from the birth of the prominent Russian-US scientist. We propose to sponsor the international symposium «**World Economy of the 21<sup>st</sup> Century in the Retrospect of Ideas and Models of Vassily Leontieff**» under the aegis of the UNO in New York in 2006, where to represent, in particular, the outputs of a long-range global forecast for a period up to 2050 launched by our institutions in association with the RAS's Computer Center and based on the multi-dimensional reproductive-cyclical cross-civilizational macro model. We are ready to be involved in such international team of scientists. The UN is examining the development scenarios of the global civilization in demographic, environmental, technological, economic, geopolitical and socio-cultural aspects determining the tendencies and challenges of the 21<sup>st</sup> century and possible scenarios to respond to them.

Based on such forecast which should be subjected to evaluation by scientists, repeated discussions, be published and displayed on the Internet, one should set to framing the **Concept of transformation of self-government institutions of the global civilization** on a wider complex of problems, with the involvement of forecast authors, politicians and public figures representing all civilizations, all sections of the global civil society. Tentatively, certain considerations may be stated on possible and desirable directions of such transformation.

As a final objective that may be implemented only by the second half of the 21<sup>st</sup> century one should get orientated towards the establishment of the **World Confederation of States and Civilizations**. This confederation may be of a three-level nature: first level — states which delegate a part of their powers to the upper level (in certain instances the boundaries of the states and civilizations coincide in actual fact — for instance, for Japan or India). The second level — civilizational unions as the European Union, NAFTA, African Union or CIS that represent vital interests of local civilizations with a multi-state structure. The higher level — UNO and other global institutes which will be vested with certain powers and resources for settlement of global matters delegated to them. And the powers of

each level may be fixed in the global constitution or other similar mandatory document approved by an absolute majority of the states and civilizational unions. The global civil society should also be involved in the establishment and functioning of such confederation.

From the present-day viewpoint it may be said that the establishment of the global confederation is Utopia. **V.I. Lenin** evaluated the idea of establishing the united Europe just so in his time. But now new arguments speak for such path. First, nothing unites like the existence and awareness of a common deadly threat, and the 21<sup>st</sup> century provides such threats addressed above in plenty. Second, the historical experience of the Swiss Confederation that has reached the prosperity and peaceful cooperation between various peoples and languages is before everybody's eyes. Third, a more recent example — the European Union which has turned into an example of union within half a century from the seat of two world wars and which has advanced far towards the confederative structure exercising a number of supra-state functions.

The way to the confederative union implies the *establishment of the system of the organs of power on the global level* based on the principle of separation of powers that has been tested for centuries. It means that the UN General Assembly (as the chamber of states) and the Security Council (as the chamber of civilizations) will gradually be transformed into the supreme representative-legislative body adopting mandatory acts within their terms of reference. The Secretary-General and the UN Secretariat will assume the functions of executive power, a kind of the world government where the functions of the ministers will be performed by many present-day UN organizations. The Economic and Social Council, UNDP, UNEP, UNESCO, WHO, FAO etc.) The global system of the law-enforcement bodies — international courts, forces to maintain law and order, international peace-keeping forces etc. will form.

The *global law*, whose separate elements already exist in the form of treaties banning nuclear and other weapons of mass destruction, banning nuclear tests etc., will act as a regulator for the activities of the global bodies of power.

The most sophisticated matter is to ensure a *financial base* for the activities of the global bodies of power. It is currently built on the fees of the UN member states and other international organizations according to the agreed quotas, and also the establishment of separate funds (for instance, the Global Environment Facility) or sponsorship (for instance, in the UNESCO activities). However,

these resources are absolutely not enough for the settlement of global problems set by the 21<sup>st</sup> century. At the meeting of the Round Table at the Summit on sustainable development in Johannesburg (2002), we proposed that the global funds – ecological, technological and socio-cultural – should be established on deductions from super profits (natural rent, ecological anti rent, technological and financial quasi rent) received on the world market. This proposal was seconded by the Round Table participants.

A tentative structure of the future global Confederation of states and civilizations is given in *fig. 15.1*. This structure may include six outlines:

➡ *legislative outline* – the General Assembly as a chamber of representatives of the states and the Security Council as a chamber of representatives of civilizations;

➡ three-level *executive outline* – on the upper level the Secretary-General and the Secretariat; functional and sectoral bodies (performing the functions of confederative ministries) – the Economic and Social Council, World Labor Organization, World Health and Demography Organization, UNEP, UNDP, FAO, UNESCO etc., and also international peace-keeping forces (with the reorganized NATO); regional bureau for continents – Europe, Asia and Oceania, Africa and America;

➡ *judicial outline* – the global constitutional court, international tribunal, international arbitration and patent courts, Interpol;

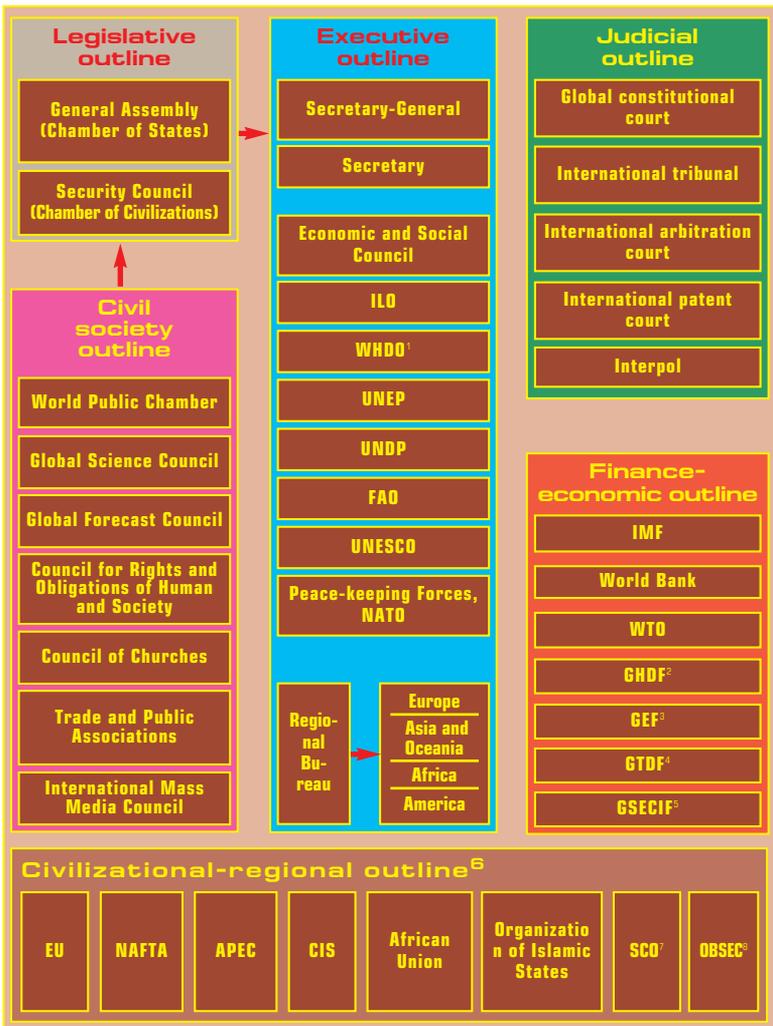
➡ *civil society outline* – the world public chamber as a representative body of the global civil society; world science council («Council of the Sages») as the supreme scientific-advisory body; the global forecast council approving its activities with the latter; the council for rights and obligations of human and society; council of churches; international mass media council; international trade and public organizations and associations (like the International Red Cross, Greenpeace etc.);

➡ *financial-economic outline* engaged in financial support of programs and projects of a global nature and including the International Monetary Fund, World Bank, World Trade Organization, Global Health and Demography Fund, Global Environment Facility, Global Technology and Development Fund, Global Science, Education, Culture and Informatics Fund;

➡ *civilizational-regional outline* including civilizational unions (European Union, CIS, Organization of Islamic States), cross-civilizational (NAFTA, APEC, African Union, Organization of the Black

Figure 15.1

**A Tentative Structure of the Global Confederation of States and Civilizations**



<sup>1</sup> World Health and Demography Organization

<sup>2</sup> Global Health and Demography Fund

<sup>3</sup> Global Environment Facility

<sup>4</sup> Global Technology and Development Fund

<sup>5</sup> Global Science, Education, Culture and Informatics Fund

<sup>6</sup> Civilizational, cross-civilizational and interstate associations

<sup>7</sup> Shanghai Cooperation Organization

<sup>8</sup> Organization of the Black Sea Economic Cooperation

Sea Economic Cooperation, Shanghai Cooperation Organization) and regional unions of states (like Mercator).

Naturally, this is only an initial sketch for discussion and a further revision and may be implemented within a good few of decades. But it is important to determine the guidelines and strategy towards the real unity of the global civilization that is able to respond to the challenges of the 21<sup>st</sup> century.

Our recommendations were executed in the form of the report at the Second World Congress of Global Civilization (New York, November 14–16, 2005) and submitted to Russia's Ministry of Foreign Affairs and the Russian mission to the UN.

### **15.3. Two Views on the Future of the World: Invitation to Discussion**

In 2005 the report of the US National Intelligence Council's (NIC) «Mapping the Global Future. Report on Project – 2020» was published [171].

This report containing a forecast for the development of the world economy, technology, policy, demography, tendencies and effect of globalization for a period up to 2020 was profoundly prepared. It was the continuation of the previous reports of the National Intelligence Council «Global Tendencies – 2010» and «Global Tendencies – 2015». In making such report more than a thousand scientists and forecasters were involved, the online Web site was constructed in order to promote a global dialogue, a series of conferences and seminars (in the USA, Budapest, Johannesburg, Chile, Singapore and the UK) were delivered, consultations with experts of the International Institute for Strategic Studies (London), the UN Millennium Project, Center for Long Range Global Policy and the Future Human Condition of the RAND corporation, Eurasia group, the Simpson Center and Technologic Center. **A. Toffler, M. Oppenheimer, T. Gordon, D. Dewgar, E. Mathews** and other scientists were invited to discuss the ideas of the report. It may be said that this report expresses the views on the future of the world, global civilization prevailing in the West, and methodology applied in the long-range forecast.

After reviewing this treatise, an interested reader will notice easily that while certain postulates and conclusions are similar, different views on the world's future also find their expression. It rests on

the heritage of the Russian prognostic school, and first of all, on **Nikolai Kondratieff's** theory of foresight, methodology of **Vladimir Bazarov's** economic forecast and socio-cultural forecast of **Pitirim Sorokin**.

In the 60s–80s long-range forecasts, complex program for a scientific-technological advance and its social-economic effect for 20 years and the general plan for the development and distribution of productive forces for 15 years were worked out. The National Economic Institute for Forecast headed by academicians **A.I. Anchishkin** [6, 7] and **Yu.V. Yaremenko** [251] and the Council for Productive Forces Studies headed by academicians **N.N. Nekrasov** and **A.G. Granberg** [147] were in charge of the methodological guidance of this work. In the course of neoliberal market reforms this work was discontinued, but now it is being renewed. In 1995 the Federal Law «On State Forecast and Programs for Socio-economic Development of the Russian Federation» was adopted, where the elaboration of long-range, medium-term and current (annual) forecasts is provided. The RAS Institute of Economics under the guidance of academician **L.I. Abalkin** has worked out the long-range forecasts until 2015 [170], and then until 2025 [186]. The National Economic Forecast Institute under the guidance of academician **V.V. Ivantsev** elaborates long-range forecasts using the forecast interindustry balance [69]. The RAS Institute of World Economy and International Relations under the guidance of academician **V.A. Martynov** and associate of the RAS **A.A. Dynkin** has published the forecast for the development of the world economy for a period until 2015 [130]. The long-range forecasts are reasoned in the treatises of academicians **A.G. Aganbegyan** [3], **I.V. Bestujev-Lada** [14], **V.L. Makarov**[141] and **A.D. Nekipelov** [143].

The authors of this treatise participated in preparation of individual volumes of such complex program for a scientific-technological advance and its socio-economic effect for 20 years, published the works on the theory of cycles and crises forecast [243, 249], long-range forecasts for the development of science and technologies, innovative development of the world and Russia [99, 103, 250], dynamics of the structure of world local civilizations in the 21<sup>st</sup> c. [242, 247, 101]. In the forecasts a multidimensional reproduction-cyclical macro model (modification of the interindustry balance), geocivilizational model and a strategic matrix were applied.

In Russia, a series of international conferences and discussions dedicated to the future of the world and Russia, formation of the

post-industrial civilization, future of local civilizations and their interaction, regularities and outlooks for transformation of society were held.

Therefore it is possible to speak about the existence of two scientific schools of the foresight of the future – in the West (the center is the USA) and in Russia methodological approaches and predictable tendencies of which are different in many ways. It appears that it may be useful to make a comparison between these schools and their views on the future through comparing the basic points of the report of the US National Intelligence Council (NIC) «Mapping the Global Future» and this treatise.

Let's dwell upon the similarities and differences of these two views on the future of the world – US and Russian.

1. The forecast of the authors of the US National Intelligence Council are based on the **methodology of forecast** traditional of the West: the most qualified experts are identified, their opinions on the range of problems selected are requested, the results of such inquiry are summarized, discussed at the conferences, seminars, possible tendencies for the future are recognized by majority identified and results are published. In doing so various methods for making a collective opinion on the future of the group of experts are applied: Delphi method, brainstorming, foresight etc.

The main disadvantage of such approach is that in mass consciousness, including most of experts, an inertia-based approach prevails, extrapolarity of thinking, striving to transfer the tendencies that have formed in the past to the future. Therefore the breaks in the trajectory of movement of social systems (and they are imminent for the cyclical dynamics) turn to be unpredictable, embarrass, give rise to what **Alvin Toffler** calls «future shock». The forecast may be either optimistic or pessimistic depending on the tendency prevailing now and a psychological mood of such expert.

The Russian forecast school based on **N.D. Kondratieff's** theory of foresight and developing this theory has a different approach. The followers of this school proceed from the cyclical-genetic regularities of dynamics of the systems – economic, technological, natural-ecological, social-political, spiritual sphere, medium-term, long-term and super long-term cycles changing each other from time to time and crisis phases in the completion of these cycles, interacting between each other, and from the principles of future synergetics. This gives an opportunity to foresee cycles and crises in the dynamics of systems and their mutual influence. Therefore in our forecast

Table 15.1

## Look in the Future of the World from USA and Russia

Data	USA	Russia
1	2	3
1. Methodology of foresight	Summarizing opinions of qualified experts; foresight; scenarios; conferences	Cyclical-genetic regularities; global model building; cliometric measurements; scenarios; civilizational approach.
2. Horizon	20 years	50-100 years
3. Forecast target	Countries, interstate unions (EU); globalization	Local, world and global civilizations; leading countries; world tendencies
4. Global scenarios	<p>– <i>Davos Peace</i>: Globalization becomes less westernized; rise of China and India; decline of the West.</p> <p>– <i>Pax Americana</i>, the dominance of the USA, strengthening the union with Europe; economic slack in China; easing of terrorism;</p> <p>– New Caliphate: rise of the Moslem world, strengthening of terrorism.</p> <p>– Outline of Terror -diffusion and use of mass annihilation weapon; defeat of globalization; well-doing of trade in arms and terrorism, shadow business.</p>	<p><i>Optimistic</i>: based on the dialogue and partnership among civilizations in the multipolar world a sustainable development will be ensured, the gap between rich and poor civilizations will be reduced, the humanistically-noospheric post-industrial society integral, socio-cultural order; will establish itself,</p> <p><i>Pessimistic</i>: return to the bipolar world, confrontation and clash among civilizations, the gap between rich and poor countries will increase, a neoliberal model of globalization</p>
5. Economy	GDP growth of 80% for 20 years and 50% per capita. The major part of increase is in the developing countries. Prosperity of the West, rise of China, India and then Brasilia and Indonesia. Increase of expense for defense. China will surpass Japan in volume of national wealth by 2015, USA - by 2040; India will surpass Japan by 2033.	Slowing down the economic growth rates by 2020 at the down wave of the fifth Kondratieff's cycle; speeding up by 2050 at the up wave of the sixth cycle, then slow-down again. Reducing the economic stratification of civilizations, countries and social strata (optimistic scenario).

1	2	3
6. Technology	The technological revolution will serve as an impetus to a sharp rise in knowledge and wealth of people, cause a growth of investments in the assimilation of high technologies in the developed countries, in China and India, then in other countries. Biotechnological revolution. Convergence of biologic, information nanotechnologies	A transition to the post-industrial technological mode of production in the 1 <sup>st</sup> – half of the 21 <sup>st</sup> c., prevailing of the sixth technological order from the 20s and the seventh order from the 60s. An increase in a technological gap between the vanguard and lagging countries and civilizations.
7. Ecology, natural resources and power engineering	Worsening of the climate, global warming. The US leadership in global efforts to protect the environment. A sufficient reserve of fossil fuel to meet the world demand for power resources. Increase in a share of gas. The power resources of Russia will support its economic growth, but it may turn into an oil country	The aggravation of environmental and energy crises. Transition to the noosphere. Global mechanisms for environmental protection. Hydrogen power engineering. Reduction of a share of fossil fuel.
8. Demography	Aging of population in the dominant powers. Depopulation will embrace Europe, Russia and Japan, and then China entailing the growth of inflows of migrants. Increase in stratification of the world population by macro regions (56% - Asia, and 16% - Africa, 13% - the Western Hemisphere, 5% - Western Europe). A growth of the share of Moslem population	Decrease in the growth rates of population to zero by the end of the 21 <sup>st</sup> c. Depopulation in one civilizations and aging in other. Population high growth rates in poor civilizations. Intensification of migration, cross-civilizational amalgamation and conflicts. Life span growth
9. Social dynamics	Persistence of social inequality. Improvement of the status of women. «Brain Drain» will not reduce. Difficulties with social security. A growth of middle class share	Reducing of stratification and polarization of civilizations and countries under the optimistic scenario, reducing poverty. Decrease in a share of innovatively active population, social passivity.

Table 15.1

1	2	3
	A new enormous pandemia might stop globalization.	
10. Geopolitics	The USA is the only most powerful player. The rise of Asia, raising of the role of China and India. The soil for terrorism will persist. Islam will remain a powerful force. The arc of instability will stretch to the Near East, Asia and Africa. Depopulation, terrorism, authoritarianism will restrict the opportunities of Russia to become a geopolitical player. A chance of a total war is minimum. The UN and international institutes should adapt for global changes	The tendency towards the monopolar world will be replaced with multipolar; a return to the bipolar world is possible (USA-China). A transition to the dialogue and partnership among civilizations in the decision of global challenges. World wars and global clash of civilizations is excluded. The UNO and other international organizations will be vested with the authority functions while sovereign states will persist
11. Internal political tendencies	A nation-based state will remain the major unit of the world order. Slowing down of democratization rates, a rollback is possible in a number of countries. The Chinese leaders will face with the problem of pluralism. Aggravation of internal conflicts. Growth of organized crime	Expansion of democratic systems in the context of the specifics of civilizations. Exclusion of totalitarianism, mono party-membership. Optimization of the role of the state in economy, social sphere, and ecology. Aggravation of social conflicts in the transitional periods. Increase of the role of the youth and women in policy
12. Spiritual sphere	Internetization and globalization of spiritual life. Religions will be in the center of new forms of identity-based policy. Growth of radical Islam. Diffusion of Christianity in China and Nigeria	The formation of an integral socio-cultural system. Scientific revolution, formation of a new paradigm, society of knowledge, multi-lingual Internet. Revolution in education, continuous education, bridging the gap in education of civilizations. Return to high culture, keeping cultural diversity. Raising the role of religions, new ethics

we are based on a transition from the industrial civilization to post-industrial, which will occur in the forthcoming half of the 21<sup>st</sup> c., a change of technological, economic and ecological modes of production, socio-cultural system, and in the first two decades of the 21<sup>st</sup> c. the fifth Kondratieff's cycle and a technological order adequate to it will turn out to be at the down wave. All this happens against the background of change of historic super cycles. In this period a sharp aggravation of contradictions and conflicts, a fall in the economic growth rates, remaking of the structure of the world economy, civilizational and structural space are unavoidable. The global community as a mega system, according to **A.A. Bogdanov**, will turn out to be in the disorganized state. Therefore our forecast for the near twenty years is qualitatively different from NIC's.

Another picture is outside these limits when the difficulties and contradictions of the transitional period will remain in the past, when there will be the up wave of the sixth Kondratieff's cycle, the major parameters of the world economy will be improving until the next down wave, which will, however, not be as destructive as the previous one.

**2.** The cyclical-genetic approach to the foresight of the future implies the length of its **horizon** — half a century (duration of one Kondratieff's cycle) or temporal scale of a civilizational cycle, which permits to foresee an approximate time for both a crisis change of cycles, and a transition from one phase to another, which is accompanied by the points of inflection in the trajectory of dynamics of systems. Therefore we believe that the beginning of the 10s and the beginning of the 20s will be accompanied by deeper economic crises at the down wave of the fifth Kondratieff's cycle, and in the next twenty years the depth and duration of crisis phases will be less. Of course, the NIC's forecast covers a shorter period about 15 years. Such period is reasonable for an extrapolation approach, but does not permit to identify the breakpoints with respect to the trajectory of dynamics of systems and determine the cycle of a longer scale.

**3. The forecast target of the NIC** is traditionally countries or their established groups as the EU — major factors on the global arena of the industrial epoch. A *civilizational approach* is typical of the Russian school, the establishment of tendencies in the dynamics in the past and for future of local civilizations, change in their generations within framework of transitions to the next historic epochs (world civilizations). Therefore in the structure of forecast shifts, more focus is laid on the spiritual sphere, socio-cultural system, sys-

tem of civilizational values which play a decisive role in the identification of civilizations and cultures. It should be noted that the problem of interaction and dynamics of civilizations has passed out of the NIC forecast authors's view at all.

4. Both forecasts are based on the **scenario approach**; however the principles for making such scenarios are different. The NIC's forecast is orientated to four possible scenarios, mainly of a geopolitical nature. The scenarios of our forecast are based on the optimistic or pessimistic variants for the development of future under a various balance and development of sixth major factors making the genotype of civilizations — demographic, natural-ecological, technological, economic, social-political and spiritual sphere. The cliometric measurements were made with respect to each factor and integral estimations have been deduced for each local civilization and the development stages of world civilizations for two millennia in retrospect and for a century in prospect. The reproduction-cyclical and geocivilizational macro models, strategic and geocivilizational matrices were applied in the course of inquiry.

5. The NIC's forecast gives optimistic ideas of future of the **world economy** — a GDP increase of 80% for 20 years, 50% of income per capita; this means 3.0% and 2.4% per annum, respectively — more than in the previous decade (2.75% and 1.15%). Our forecast is that the first two decades at the down Kondratieff's cycle, the indicators growth rates will be less than previous, and only then with a transition to the up wave of the six Kondratieff's cycle, they will increase. Moreover, in the near decades, energy (a growth of prices for fossil fuel) and environmental (natural catastrophes — tsunamis, hurricanes) and other restrictions will tell.

6. We are less optimistic in the estimation of a **technological future**. Certainly, a technological revolution will be evolving, but it will require an expensive alteration of a technological base of production in transition to the sixth technological order, and new generations of equipment will not give an immediate return. Moreover, the technological leadership of vanguard countries will grow, and they will try to secure the prevailing positions in the world's high-tech markets. The technological factor may produce a restricting influence on the dynamics of economy of China, India and other countries, which will face great difficulties in the assimilation of the sixth technological order against growing globalization.

7. While the NIC's forecast speaks about a possible worsening of the climate and environmental pollution, but in general the **natural-**

**ecological** foresight looks optimistic: it is anticipated that fossil fuel is enough to meet the demand for power and that the USA will remain the leader in the solution of environmental issues. Our environmental forecast sounds much more anxious. The level of depletion of the best natural reserves and air pollution has reached such scale that the world took the path to the environmental catastrophe. However, the directions to prevent it are taking shape, prevention of the evolving global energy crisis — on the way of the replacement of fossil fuel with alternative sources of power, including hydrogen. These issues have not found any worthy reflection in the NIC's forecast.

**8.** In both forecasts much attention is paid to the **demographical** issues, depopulation and aging of population in many leading countries, an increase in the migrant flows and contradictions arising out of it. However, our forecast relying on the UN demographic forecast is orientated towards a longer period (50–100 years) and raises a question on two types of demographic crisis — depopulation and overpopulation, intercivilizational contradictions in the context of migration — more sharply.

**9.** The issues of future **social dynamics** are inquired into in both forecasts. The NIC's forecast lays emphasis on the persistence of social inequality, difficulties of social security and a threat of epidemics. In our forecast a more focus is on the issues of stratification in the context of countries and civilizations, bridging the gap between them, factors to improve the activity of younger generations.

**10. Geopolicy** occupies the central place in the NIC's forecast (the forecast is mainly devoted to this) as the maintenance of the US leading position in the geopolitical space, and also possible geopolitical adversaries — China and Muslim countries. Our forecast is oriented towards the formation of the multipolar world based on the development of the dialogue and partnership among countries and civilizations, and inadmissibility of wars.

**11.** The NIC's forecast focuses more attention on the **internal political** problems. The tendencies towards the slow-down of democratization rates, a possible rollback in individual countries, growth of crime and aggravation of internal conflicts are observed. Our forecast is based on a differentiated approach and democracy in various civilizations, aggravation of contradictions and strengthening the role of the state in the transitional crisis periods.

**12.** Extremely few words are devoted to the **spiritual sphere** in the NIC's forecast, which logically arises out of the starting method-

ological positions. Only the role of religions, an increasing influence of the radical Islam is addressed in detail. On the contrary, the issues of dynamics of spiritual sphere – scientific revolution and revolution in education, transformations in culture, ethics, religion, system of civilizational values – occupy one of the central places in our forecast.

Thus, the reader faces two fundamentally various methodologies of foresight, two different views on the world's future. What view is closer to the truth is suggested for judgment by the readers with full awareness that time will be the final arbitrator.

## **15.4. Future of Civilizations in the Mirror of Futurosynergetics\***

### **15.4.1. Principles of Futurosynergetics**

Futurosynergetics is a scientific discipline the subject-matter of which is modeling of future evolution of socio-cultural systems, and its method is a synthesis of principles of the general theory of systems, synergetics and psychophysics. Futurosynergetics is based on a new type of apperceiving the world – non-linear thinking.

In the philosophy of history futurosynergetics introduces a new fundamental postulate: the course of history is viewed as bifurcational. The development under a bifurcational scenario taking place in the reality differs from a regular model of cyclical processes. First, when passing the point of bifurcation and, consequently, a spontaneous loss of stability of the system secondary and accidental factors neglected in stable conditions begin playing a fundamental role. Second, evolutionary space after the point of bifurcation is formed by a spectrum of alternative virtual scenarios.

A kind of «light from future» coming as a result of it permits to implement explicit and forecast advantages of futurosynergetics: hence it is clear that future influences actively the course of historical processes as well as the past. A fundamental role of weak factors in the area of bifurcation provides a fundamentally new opportunity to the historical actors – simply people who take strategic decisions: using trigger effects to make evolution, after the point of bifurcation has been passed, take the optimal path of development. Or, at least, to reduce the risk of taking dead-end evolutionary scenarios to minimum.

<sup>1</sup> This section is written by Prof. [L.V. Leskov], Doctor of Physics and Mathematics, Academician of the Russian Academy of Natural Sciences.

The concept of regulatory parameters of order may become the tool for the implementation of such opportunity. A preference set of such parameters corresponds to each of alternative post-bifurcation scenarios. First, it allows making an a priori assessment of a relative probability of such scenarios, second, controlling that set of parameters which is in line with evolutionary optimism.

In analysis of the problem of civilizations the methodology of synergetics requires that they should be without fail incorporated in the hierarchical system of higher and particular complexes. The world civilization stemming from interaction of local civilizations is itself a composite subsystem of a more general geosocial system, which in its turns represents a part of a cosmoplanetary complex. Neglect of geosocial ties determined by deontologized subjectivism traditional of western culture directly leads to an environmental crisis. While ignoring the fact of space frontage of a biosocial system of the Earth means narrowing of a worldview horizon and a concurrent limitation of a potential of innovative technologies.

Another hierarchical chain playing an essential role in the analysis of the problem of civilizations is a relation of the phenomena of culture, civilization and society. The definition of culture that may be qualified as synergetic belongs to **I.G. Yakovenko**: culture is an extra-biological mode for solution of general biological problems of «Homo sapiens» type. As for meaningful sense of the concept of civilization then the understanding of civilization as society where labor is differentiated, the structure of which is materialized in interactive relations in *socium* matches most to synergetics of all its various definitions. Hence it is clear that culture is a more general concept than civilization as it cements society into a single all-linked system. As for civilization this is only a certain stage in the development of society, though of prime importance.

Society is a space of being of culture and civilization. Our tasks do not include either turning to the works of the founders of classic sociology (**A. Kont**, **K. Marx**, **E. Durheim**, **M. Weber**, and **V. Pareto**) or contemporary works devoted to the analysis of civilizational challenges of the 21<sup>st</sup> c. (**D. Bell**, **M. Castells**, **Z. Bauman**, **Yu.V. Yakovets**). Let's confine ourselves to referring to **A. Turren** who came to the conclusion that classical theories have failed to answer the question about the causes of stable unbalance (homeostasis) of society, which is able to transform and rationalize. It is synergetic modeling that is able to a great extent to clarify this key issue.

As the first stage of solution of this problem synergetics considers a system modeling of evolution of culture and civilizations in relation and interaction of cyclical processes in a bifurcational space of scientific, technological, economic, socio-political, ethical and world view factors. Such approach allows us to give a functional definition to civilizations as a system oriented at adaptive-adapting and creative-production activity aimed at expanding the boundaries of homeostasis and opening up new ecological niches in all multi-dimensional space of the being of culture.

It stands out from this definition that the core factor guaranteeing both homeostasis and progressive evolution of society is information. A stop in the embracement of new information would mean the death of civilization: history issues increasingly threatening challenges, and an efficient response to them may be got only through a breakthrough to new fundamental knowledge.

But obtaining and embracing new information is a problem of relation of historical actors and passionaries in society who are able to generate new senses. The inquiry into this problem is the second stage of a synergetic analysis of a teleological evolution of civilizations. The methodological basis of such analysis is the employment of the socio-gluon model («gluon» means «glue» in Latin).

### **15.4.2. Evolutionary Space of the 21<sup>st</sup> Century**

Let's consider major vectors of evolution of civilizations in a bifurcational space of the 21<sup>st</sup> c. This space has a multi-dimensional, but all-linked nature.

**1. Culture.** Let's take as a basis not a synergetic, but narrower understanding of a phenomenon common to all humanity as a system incorporating ideas, language, codes, beliefs, traditions, social structure, upbringing and tools (you'll find such definition in the Encyclopedia Britannica). As historical experience of the 20<sup>th</sup> c. shows national identity has a high degree of stability. It explains a failure of the liberal reforms in Russia to a great extent: they came into conflict with traditional customs and beliefs of the Russian ethnos. The advanced public in the West does not succeed in surmounting motivational and behavioral stereotypes of consumerism and deontologized subjectivism well-learned by the population through the same reason.

A demological (from «demos» — «people») component of a socio-gluon field is distinguished by its particular stability. The second half

of the 20<sup>th</sup>c. was marked by a crushing defeat of two ideologies that confronted each other for almost two hundred years — liberal and socialist. The 21<sup>st</sup> c. began in the conditions of ideological vacuum that is especially felt in Russia. In such countries as China the outward appearance of communist ideology still persists, but the structures of market capitalist economy are gathering momentum under its umbrella.

The state of ideological vacuum has manifested itself in an acute shortage of charismatic leaders. While they were plenty in the first half of the 20<sup>th</sup> c. (**V. Lenin, J. Stalin, F. Roosevelt, W. Churchill, Ch. De Gaulle and Mao Zedong**), then nowadays there is no leader who would be at least closer to such outstanding political leaders by his calibre.

The consequence of high stability of national cultures and identity is the fact that even in the distant future it is unlikely that a serious cultural leveling of ethnos will occur. Their autonomy won't disappear under globalization pressure. While the signs of such leveling are observed in modern Russia, especially among the young, then these processes are only of a surface nature on a deeper level of national identity.

The stability of ethnical traditions fosters also such negative phenomena as terrorism. Quite happy young people of Islamic belief who were born and brought up in the UK, made terrorists attacks in London in summer 2005. The terrorists who sent their airplanes to the buildings of the World Trade Center in New York were mainly the nationals of one of the prosperous state — Saudi Arabia. It needn't saying how strong inclination for the death «for belief» can be with the natives from the poorest countries of the world. The world community will be able to handle with the waves of terrorism only through one way — striving for a cultural rise worldwide, including the most backward regions.

**2. Ecology.** Many specialists warn of an inevitable change in climate caused by a technogenic pressure. From the viewpoint of synergetics the collapse of biosphere might occur spontaneously when it will be already late to take any measures.

According to specialists, an allowable removal of annual products of biota should not exceed 1%. But humanity consumes more than 10%. Furthermore, the limit of a relatively safe receipt of adding energy makes 1% of the solar constant, i.e.  $10^{14}$  W, to the environment. Under the population size of 10 bln. people to be reached by the middle of the 21<sup>st</sup> c. and consumption of energy of 5 kW per capita we'll get  $5 \cdot 10^{13}$  W that is close to the limit, to a critical threshold. If existing technologies persist, the global catastrophe is impending.

**3. Power engineering.** 90% of energy demands of humanity are satisfied by carbon fuel. Meanwhile, the oil reserves in many oil-producing countries will end soon. According to the «British Petroleum» (the «Energy of the World–2005» report), such reserves will be depleted in 21 years in Russia, in the USA – in 11 years, in Norway – in 8 years, and in the UK – in 6 years. Admittedly, there are more optimistic scenarios. The «Sibneft» representatives states that their reserves are enough for 39 years, and «Lukoil» speaks about 25 years.

However, a difference between such estimates does not change anything in its essence. Not later than in 2050 an acute oil hunger will set in the world. Therefore a prompt scientific-technological search for alternative sources of power is necessary already now. It is already clear that nuclear and thermonuclear power engineering as well as the use of solar energy will not get priority through various reasons. Apparently, major hopes will be associated with hydrogen power engineering, and later – quantum vacuum energy development. Their advantages are specifically in ecological cleanness.

**4. Demography.** As early as 15–20 years ago the specialists were afraid of a catastrophic growth of population size in the Earth. However, the situation has changed: a fertility coefficient dropped to an acceptable level in most developing countries. While the contrary danger has arisen for developed countries where such coefficient reduced to 1.2–1.3 units: a decrease of native population size and its replacement by representatives of other ethnical culture. If such tendency persists (and everything indicates it), then by the middle of the 21<sup>st</sup> c. the very existence of the western civilization as it is now may be imperiled. In Russia such processes run even more intensively.

It is important to understand, what such tendencies are associated with. The analysis of the problem using an information paradigm has allowed advancing a hypothesis that the speed of accumulation of positive knowledge and population numbers are linked. According to such hypothesis the population size varies depending on the speed of accumulation of information, but it will not exceed 10 bln. people by the middle of the 21<sup>st</sup> c. It is quite possible that such theories are correct. However, no estimates eliminate the problem of crisis phenomena threatening the West and associated with the fall in the fertility coefficient.

**5. Fundamental science.** There is every reason to anticipate that in the first decades and even the years of the 21<sup>st</sup> c. a breakthrough

will occur in the field of fundamentally new knowledge. In order to elaborate on most probable directions of such breakthrough let's turn to the list of great enigmas that modern sciences faces and published in the famous «Science» magazine in 2005 to its 125<sup>th</sup> anniversary. The first circle of problems incorporates the largest and smallest objects in the Universe. These problems include the enigmas of dark matter and energy of space vacuum. The issues of the nature of cognition itself make the second circle. According to **D. Kennedy** and **C. Norman**, the editors of the magazine, all the said problems might be solved in the near 25 years.

The first of such breakthrough scientific directions is in the field of physics, second — of psychology. There is still a barrier between these fundamental directions, which is determined by their particular specialism. But there are no such barriers in nature, fundamental laws are universal. Therefore it might be anticipated that a breakthrough will also occur in the third direction — a synthesis of physics and psychology in the disclosure of material proto-structures of cognition.

It is difficult not to appreciate the world view and practical significance of such breakthrough. New complexes of innovative technologies will be developed on its basis, new, highly efficient ways to solve the said problems will be found.

**6. Globalization. J. Bell**, the originator of the popular theory of the post-industrial society twenty years after the publication of his famous forecast taking stock of the realities of modern world called them bitterly «fear and trembling». The occurred changes were determined by evolution of late capitalism under conditions of the network society (the term coined by **M. Castells**). The emergence of global market economy under an absolute power of international financial capital and transnational capital (TNC) has become a major distinctive feature of modern stage of human history.

The phenomenon of globalization and rigid competition on the world market has restricted sharply the freedom of action of sovereign states, which are transforming gradually into the offices of pursuance of the policy of financial capital and TNC in the sphere of local economy. The former geoculture of liberalization viewed the state as a tool of security of nationals and maintenance of social justice (at least within certain limits). Now the power in the global world economy has passed to the financial capital, and the state has become its myrmidon. How it occurs in real life is well-seen by the example of the RF government.

This new master of the world is seeking for maximum profit and is able to generate it. Resting on advance information technologies, it has got a high operational efficiency and flexibility: a turnover of speculative capital has reached USD one billion per minute! And therefore labor has become an excessive category.

Capital has learnt easily to evade the need to pay costs of production (environmental conservation, social security issues etc.). **I. Wallerstein**, a US sociologist, calls such refusal to settle the accounts a dirty secret of capitalism. As a result the environment is degrading increasingly quickly.

A unipolar globalization has resulted in the fact that the scenario of the post-industrial society turned out the Utopia to a great extent. A sharp polarization of income of the population occurred in most countries. The so-called elite to whom nearly all world is opened has emerged and for whom the concept of state boundaries does not actually exist. The «Head of Chukotka» got an opportunity to buy luxurious palaces, yachts and the best football teams all over the world, while all other residents of the world «Chukotka» have remained marginals.

**7. Human factor.** Globalization according to a unipolar model has become a reason that the Faust type of man with its rationalist and deedful mood became an anachronism. It was replaced by the Consumer — a major character of the world market. His tastes dictate what to do to the producers of benefits and goods and such tastes are formed by advertising and television that are fully controlled by His Majesty Financial Capital.

In such conditions two mutually exclusive processes are running. The first is a gradual dilution of national identity. A special «breed of people» comes into being about whom it might be said: they are Johns oblivious of their roots. Indeed, one cannot be a patriot of Financial Capital! Meanwhile the state eliminates its integral right to sovereignty.

Another process is determined by specifics of information revolution. Industrialization gave rise to homogenization of the workers at large production complexes. It has played the role of a «melting pot» for the residents in America and other developed countries. The situation in society of the 21<sup>st</sup> century forms differently: both people and companies may establish themselves where they want, and not in the place where production requirements make them do so — labor mobility has become very high. As a result people have got the opportunity to keep their ethnical affiliation.

One more consequence of globalization according to this model is an increasing and deepening gap between the «golden billion» and the rest of humanity. Hatred is developing among the underprivileged for those who have taken in hand the lion's share of the riches on the planet. Rancor and despair father waves of terrorism, which is already spoken about as a new world war.

«Golden Billion» does not need large periphery. Moreover, it is dangerous for it: there are not enough natural resources for everybody anyway. It would be good for it if a «redundant» part of humanity simply dies out. This will be an optimal solution of a demographic challenge. Thus, for instance, it is already estimated the population size that is enough for «servicing» the territory of Russia — 30 million people. Not necessarily native Russians at all.

In his fundamental work «Capital» **Marx** wrote that contradictions between a private nature of property and public nature of production aggravate as well as between the affluent class of capitalists and working class who lives more and more poorly. Hence, he made a conclusion that the victory of the world socialist revolution is impending.

Marx's forecast failed. Smart «captains» of capitalist «liner» of the system became aware of those dangers threatened by the «iceberg» of communism. So they found the ways to mitigate internal contradictions of their system. The theory was suggested by **J.M. Keynes**; and it was first implemented in practice by **F.D. Roosevelt**. Later the concept of welfare state emerged.

The solution of this task turned to be not too much to a sovereign state when it held full authority. But who will be able to take away a part of profit from TNC and financial capital and make them share it for prevention of the world social catastrophe? It is suggested that these functions should be delegated to the World Government to be established by the UNO. But what representatives will make such Government? First of all, the placemen of financial capital. The situation seems a deadlock.

The leaders of modern states are under pressure of a cratological field that is formed by the same financial capital. On the one hand, they can freely propagandize liberal and sometimes even socialist ideas still attractive for great masses of population. While on the other hand, they are governed by the system of archetypes hidden from society, the gist of which is in consolidation of their own power and the power of their Master. Their private assets are under safe custody with the US and Swiss banks. And if anybody of them

demonstrates excessive independence, then it is as easy as pie to return him under control.

All this is accompanied by an ideological crisis. The political engineers can't offer to electorate anything, except magic words on the theme of democracy and liberalism. Of course, what is left is the propaganda of individualism, egocentrism and hedonism strongly fostering by mass media, an even more wild ideology of dispensationalism (from the English «dispense» – to distribute, to release) which is popular among the US republican party. Under this theory the Anglo-Saxon nations along with the Jews are the issues of the twelve tribes of Israel, and therefore after the battles with Gog and Magog they will get an absolute power over the world. This ideology with all its wildness is fully in line with the Pax Americana strategy, though.

The situation seems desperate. It appears that the world has lost the factors of negative reactivity in the 21<sup>st</sup> century. If existing evolutionary vectors persist, a global catastrophe is impending.

Futurosynergetics prompts the ways to change the situation. For that it is necessary first of all to systematize potential bifurcations that civilizations will have to deal with in the 21<sup>st</sup> century. Second, it is necessary to create a complex of criteria prohibiting the development by the dead-end evolutionary scenarios.

### **15.4.3. The System of Potential Bifurcations of the 21<sup>st</sup> Century**

The evolution of civilizations will develop on the field of bifurcations. Using the analysis of a vector space of their development in the 21<sup>st</sup> century, let's systematize virtual bifurcation crisis that might accompany these processes. The emergence of bifurcations of two types should be anticipated, various deadlock and unfavorable virtual scenarios corresponds to the first of them, and vice versa positive scenarios to the second. Let's consider both sets of these virtual bifurcations beginning from the first of those types.

**1. Ecological crisis.** Such crisis may be anticipated in the near decades. The increase in the rates and pace of the development of world industry is able to speed it up. Under the theory of catastrophes such crisis might be of an explosive, spontaneous nature.

**2. Transformation of biosphere hostile to man.** As a self-organizing system biosphere is subjected to the principle of Le Chatellier-Brown: biochemical reactions running in it are aimed at counteracting negative disturbances of its homeostasis. The numbers of Homo

sapiens type exceeds hundred thousand times the numbers of other types close to it by biological consumption of energy. Man leads a parasitic existence towards biosphere during the last 200 years.

Biosphere has been seeking for regulation of its size generating new and increasingly efficient clones of viruses and bacteria each time. The latest of them — acquired immunodeficiency syndrome, AIDS. And what will happen if a virus similar by force, but reaching by airborne, springs up?

**3. Large-scale technogenic catastrophe.** Chernobyl may be adduced as an example of such catastrophe. But the scale of the next catastrophe might be even more severe, it's on the cards that it will become global.

**4. Energy crisis.** Its distinctive feature is that modern practices of forecasting natural resources permit to forecast it several decades in advance. Therefore humanity gets a chance to take preventive measures for easing the situation.

**5. Aggravation of struggle for natural resources.** The residents of the poorest regions of the planet also want to get their «piece of a pie», but they are seeking for maintaining their world unchanged. This split their consciousness and makes the confrontation of the center and the periphery even more ruthless. Sharp struggle lies ahead.

**6. Global financial catastrophe.** The world financial system with a turnover of billion dollars per minute can't be stable as a matter of principle. The volume of dollars being released to the world market by the USA as a global currency exceeds many times financial potential of the Federal Reserve System. There are not many factors that are able to stabilize the situation.

The economic paradigm of the global market is built so that the US monopolistic issuing center — the Federal Reserve System — is under control of major banks of the Wall Street. The IMF requires that all members of the global world economy recognize it as an axiom. As a result «extra» dollars are released to foreign economies.

A free issue of dollars resulted in financial assets — futures, options, warrants and other «bubble» values — intangible have begun to play the leading role in economy. Real production becomes unprofitable. Such system can't keep the balance long. Its failure is impending, and its effect will be awful.

**7. The decline of the western civilization.** This process might develop in several directions. First, the USA might loose the position of the world leader taken by it in the near 10–20 years. The history

indicates that life of all world empires ended the same way – downfall – by operation of the overtaxation law. Second, the change of ethnical structure that already underway in the countries of the West might radically change their status in the system of world economy. The decline of the western civilization was forecasted long ago by many researchers. In the 19<sup>th</sup> c. **N. Danilevsky** and **K. Leontieff** wrote about it, in the beginning of the 20<sup>th</sup> c. – **O. Spengler**, on the threshold of the 20<sup>th</sup>–21<sup>st</sup> centuries – **P. Buchanan**. The signs of the downfall of the western civilization become increasingly obvious.

**8. The emergence of new centers of force and aggravation of their confrontation.** First of all, China claims to this role today; India also has approached closely to this status. Under favorable concatenation of circumstances Russia will be able to play more active and independent role. As for the Islamic world, then no system-making center has been formed here yet. Internal contradictions are too strong and the major reason for that is redistribution of control over impoverishing natural resources on the planet.

**9. Axiological and teleological degeneration.** The signs of this process are especially noticeable in the West: this is an ideology of consumerism and hedonism; philosophy of post-modernism negating a rationalistic spirit of the Enlightenment; active performance of various sects and anti-human doctrines as Satanism, Scientology, Dispensionalism etc. Various meditative practices embraced from the East are extremely popular. **N.A. Berdyaev** wrote already at the beginning of the 20<sup>th</sup> c. that the new Middle ages set in Europe, his forecast will be verified, but already in the 21<sup>st</sup> century.

**10. Getting control of not individual, but collective means of mass destruction by terrorists.** The nuclear weapon is inaccessible to them, but one cannot say it about chemical and biological preparations. Terrorists are dangerous as they haven't got a single center, «headquarters» for delivering of a preventive strike, and they value death more than life.

**11. Space catastrophe.** This plot has been employed not once in blockbusters. Alas! It is absolutely real, with danger threatening not only to Homo sapiens type, but biosphere in general.

Any of these catastrophes might occur not in the distant future, but already before 2050. What is worst of all, each of them may trigger a chain reaction of other catastrophes, which is of course even more dangerous.

Fortunately for people, crisis bifurcations of the 21<sup>st</sup> century may be not only negative, but favorable for humanity. Let's try to make an appropriate forecast.

1. *A breakthrough in fundamental science.* Its development is governed by cyclical regularities when a uniform accumulation of scientific knowledge is terminated by crises. The previous crisis in sciences dates back to the turn of the 19<sup>th</sup>–20<sup>th</sup> c., and its handling led to the formulation of the theory of relativity and quantum mechanics – scientific disciplines that determined the development vector of both fundamental and applied researches throughout the 20<sup>th</sup> century.

There are universal signs of the oncoming crisis in science. First, this is confidence of most part of scientific community that all problems have already been solved and a construction of a harmonious building of science is close to completion. Second, this is the existence of facts univocally verified experimentally that are impossible to explain within the prevailing scientific paradigm. Now all these two signs of crisis in science are present and consequently the preconditions of a new scientific breakthrough are real.

2. *A transition to the sixth technological order.* The descending arm of the fifth TO falls to 2005–2015, and the rise of the next cyclical wave may be anticipated in 2015–2020. The nucleus of the sixth TO will presumably be successes in the sphere of non-conventional systems of power engineering (hydrogen power engineering, breeders, whirling heat generators), nanotechnologies and molecular biology. At the stage of transition to the sixth TO a change in the leaders of a scientific-technological advance is probable. If the official course of reforms changes, Russia has good chances to «get off the oil needle» and enter the ranks of such leaders.

3. *Victory over the most dangerous diseases* (cardiovascular, cancer, AIDS etc).

4. *Development of effective water treatment facilities.*

5. *A step forward in production of food* (safe modified plants, gene technology). It is probable that **V.I. Vernadsky's** idea about autotrophic generation of food proteins directly from bony tissue. All this will permit to eliminate the problem of hunger on the planet.

6. *Surmounting of deadlock ideological models of late capitalism* (hedonism, postmodernism, dispensationalism etc.) An overturn may happen in the system of world views and ideology based on discoveries of fundamental science.

7. *The emergence of new socio-political and economic structures in society.* A breakthrough in the field of scientific knowledge, reducing a whole set of innovative technologies to practice, the advent of fundamentally new technologies will be the prerequisites for that. Most acute contradictions of late capitalism originally inherent to it will be smoothed over for such account.

8. *Departure from the model of the unipolar globalization.* A transition to the network world economy based on equal partnership relations between major subjects of economic life. The World Government should be established on this basis.

9. *Development of safe methods for human genome correction* in order to get over genetic illnesses, to mobilize intellectual potential of the brain and to prolong life span. An active employment of cyber-organic systems based on the achievements of nanotechnologies, molecular biology and physics of quantum vacuum.

The real landmark points of bifurcational development of world and local civilizations in the 21<sup>st</sup> c. may, of course, differ considerably from the scheme we've made. A synergetic forecast is unable to be accurate in principle: this is a direct consequence of its major advantage against traditional methods — adjustment for non-linearity. If no attention is paid to non-linear effects that the forecast assumes obvious signs of fatalism, the future is univocally determined by regularities revealed by generalization of preceding experience. It is these fatalistic principles the forecast of **K. Marx** was based on, that the victory of communism is impending, the same is the recent forecast of **F. Fukuyama** about a final victory of the principles of liberal democracy.

A real development of the history is radically different from such models just due to the fundamental role of non-linear effects, which make the course of bifurcational history uncertain in principle. Weak factors transfer a historical pattern not to the only, but one of virtual alternative scenarios.

The value of a futurosynergetics forecast with respect to the problem of evolution of civilizations is that it permits to see in advance all the field of virtual alternatives. The major restriction of such forecast is that it is based on positive scientific knowledge in its modern state and it is unable to envisage the effect of new unexpected discoveries. Therefore it should be viewed as the first forecast iteration that requires updating as scientific knowledge advances.

But already in such form in which a bifurcational probabilistic forecast may be made already today, it permits to proceed to the next stage — to formulate criteria of the ban on deadlock historical patterns.

#### **15.4.4. Criteria of Sustainable Development of Civilizations**

In order to determine such criteria it is necessary to select first a theoretical model of civilization that will conform to its development under a sustainable scenario. In such case sustainability should be understood as not a departure from a bifurcational course of history — it is impossible in principle — but as the ability to foresee the emergence of next bifurcational crises and orient a further course of history towards an optimal scenario.

Of all known theoretical models of evolution of civilizations two — **V.I. Vernadsky's** concept of noosphere and **J.Bell's** theory of post-industrial society — meet the requirements to a great extent. The principles which underlie the said models are close enough to each other. Let's take as base for our analysis using one general term for short to denote the historical trend adequate to them — noospheregenesis.

Prior to assigning criteria determining the corridor of actions that lead civilizations towards this model, let's formulate the basic postulates of noospheregenesis corresponding to it. Such postulates are given in *table 15.2*.

A priori advantages of this scenario are obvious. The principle of a creative search, freedom is understood not as the necessity, but as the choice. The scenario of noospheregenesis makes prerequisites for overcoming one of major illnesses of the modern civilization — mass replication of a certain averaged man, unification and dilution of inimitable personal identity, and triumph of mediocrity. Another distinctive advantage of such scenario is that it has a pronounced ecoanthropological nature.

However, there is no difficulty in noticing that the postulates of the evolution of civilizations formulated in *table 15.2* according to the noospheregenesis model are more of a directive nature, and therefore they can't guarantee relevant development, the more so at points of bifurcations. There is a need for simple criteria permitting to build in a trigger mechanism of negative feedback in the structure of transitional processes.

These criteria may be determined analyzing contradictions inherent to any evolutionary processes, especially aggravating in the area of bifurcation. The list of such contradictions and corresponding criteria is provided in *table 15.3*. The system of criteria or imperatives determines the conditions of sustainable handling of bifurcational crises of noospheregenesis. Let's call these criteria no-ethical.

In order not to extremely increase the size of the article, let's confine ourselves to giving comments to the second of the said criteria. The first one has been addressed enough in detail above. As for spirituality then it is often connected only with religious interpretation of such term. It is not correct: the concept of spirituality is directly related to axiological, i.e. value, and teleological aspects of human being. Therefore it is spirituality that could imbue the state project for revival of Russia with real contents. However, there is no such project yet.

The system of these criteria has such significant property that they make an integral self-agreed complex: it is enough to neglect at least one of them complying with all the rest and the sustainability of the development of civilization will be violated. This is a specific feature of no-ethical criteria — the corollary of the theorem of fragility of good that is proved in the theory of catastrophes.

In following these criteria the rules of the ban on deadlock evolutionary patterns turn out to be in hands of people who are able to take strategic decisions on the level of world and local civilizations. And hence, the opportunity to determine the corridor of permitted strategic and tactical decisions that ensure maximum probability of sustainable development according to the optimal scenario.

Analyzing general properties of the system complex of no-ethical criteria, a fundamental decision of prime significance may be made. The formation of the post-industrial civilizations means further expansion of the boundaries and sophistication of artificial human habitat, including their virtualization. Thereby the exodus of man from his original natural ecological niche will become irreversible in actual fact.

Humanity has to pay for it by weakening of natural feedback ensuring sustainability of both life of an individual human and both human socium as a self-organizing system. In order to compensate for losses it is necessary to introduce newer and more sophisticated artificial elements of negative reactive with non-linear links at that. In practice, it means first of all the need for an essential strengthening and further differentiation of centralized information management systems, including on the state level.

These requirements disagree completely with liberal policy pursued by the RF Government. Our ministers maintain that the state should leave the sphere of economic life of the country where business and market should take the prevailing positions. Such policy runs counter not only to recommendations of futurosynergetics, but business practice of development of other countries in the world.

### 15.4.5. Evolution and Interaction of Civilizations

There are known two major models of interaction among civilizations in the 21<sup>st</sup> century – their confrontation (**S. Huntington**) and partnership relations (**Yu. V. Yakovets**). There is also the third model – the world empire being created by the USA (**Z. Brzezinski**). In which of these directions are they advancing? Futurosynetics gives an answer to this question.

One should begin with a closer definition of the concept of civilizations. In the first section, we've adduced a recognized definition. Is it possible to speak about the world civilization using it? **N. Danilevsky, K. Leontieff, O. Spengler, A. Toynbee** maintained that humanity is an empty word, and no single civilization exists for it. However, there are problems common to all humanity, the decision of which is possible only based on interaction among local civilizations:

- peace and security of nations;
- combating terrorism;
- environmental conservation;
- war on drug industry;
- science and technology;
- war on poverty, hunger, shortage of clear water; public health.

The Internet and other modern communication systems have become the basis of a new economic and socio-political phenomenon common to all humanity – network community. All

Table 15.2

#### Basic Postulates of Noospheregenesis

№	Postulates	Contents
1	Creativity	The major function of noosphere is in a creative and adaptive-adapting activity for expanding the boundaries of homeostasis and developing new ecological niches
2	Co-evolution	Intensity and speed of evolution of technosphere should be agreed with the adaptive possibilities of biosphere in general and local biocenoses in particular
3	Complementarity	A socio-political and economic structure should be agreed with the technological basis
4	Harmonization	Conditions of maximum self-actualization of human creative potential and sustainable self-movement of socium should be agreed

Table 15.3

**No-ethical Criteria of sustainable Development of Civilizations**

<b>№</b>	<b>Removable Contradictions</b>	<b>Criteria</b>
1	Technosphere - environment	Economic imperative
2	Technosphere - the sphere of spirit	Imperative of spirituality
3	Technogenesis - free self-expression of person	Anthrop imperative
4	Creative activity - adaptive function of homeostasis	Imperative of tolerance
5	New level of technology - old socio-political and economic structure of society	Interactive imperative
6	Extensive anthropogenic expansion - insufficiency of natural resources of the Earth	Space imperative
7	Interest of all humanity - regional, national, confessional, class etc.	Imperative of global thinking
8	Vestiges of an old technological order - nascent structure of a new technological order	Imperative of coherence
9	Freedom of decision - level of scholarship	Imperative of competence
10	Public interests - personal and group interests	Imperative of collegiality

this affords grounds for stating that the world civilization has become a reality of the 21<sup>st</sup> century.

But is there everything so univocal towards local civilizations? Listing civilizations prevailing now they often mention Western, Orthodox and Islamic. But if one takes a good look, then it is easy to notice that many countries that are included in the Orthodox civilization (Greece, Romania, Bulgaria and Moldavia) are much closer to the western civilization by a number of parameters, and Russia is indeed a multi-confessional country. Therefore it is more correct to speak about the existence of not Orthodox, but Eurasian civilization. It unites all Russia, Byelorussia and Ukraine as well as Kazakhstan and some former republics of the USSR.

No Islamic civilization exists: only religion unites the states making it, but there live different nations who are poorly connected historically and ethnically with each other. Each of them has specific national traditions, language, local beliefs, customs etc. Also, Islam comprises various, often warring trends. It is known how unfriendly Sunni and Shiah treat each other, although they are both Moslems.

The fact of further existence of the western civilization as an integral system that includes also the USA, Canada and Australia in addition to Europe is also questionable. Could America be included unconditionally in the western civilization? Already at the beginning of the 19<sup>th</sup> c. observant **A. Tocqueville** noticed that the American character is something new, unknown to old European societies. According to **S. Lipset**, America is more religious, optimistic, patriotic and oriented at the protection of rights and most individualistic country in the world. Individualism has been always the prime principle of the American identity. Already **Benjamin Franklin**, one of the Founding Fathers, liked to repeat: «God helps to those who helps himself». The prophets of individualism were **Ralph Waldo Emerson**, **Henry Thoreau** and **Walt Whitman**.

The American religiosity has also peculiar features. The Evangelist protestants — «recrudescent Christians» as they call themselves — believe that the American principles of life are given to them by God, and therefore only their country has the right to teach other nations. This is neither more nor less than the ideological soil for the Pax Americana strategy.

But times change and circumstances change. America has also suffered a sea change. The immigrants from all over the world and first of all from Latin America are turning it gradually into a multi-cultural country. It cannot be said so far that identity of Americans is determined by their European roots. It is rather a new forming civilization with its exclusive and unique history. Modern identification of the USA is increasingly evolving towards its southern neighbors.

With the coming of **G. Bush Jr.** to the White House this process intensified. His rival at elections **Carry** insisted on directing the issuing resource of the Federal Reserve System to support economy of Europe and Japan. Bush believed that as the US economy has its own problems, then attention should be first of all given to them. Evidently, the US electors chose Bush and his strategy.

#### **15.4.6. Western Civilization**

Similar processes develop in Europe: the western European civilization is moving more and more away from America. Its own processes are running there: uniting the states independent before, single European economy strengthens. The opposition to the US attempts to pursue its imperial policy is increasing. One should not

forget that it is Europe that has determined to a great extent the look of modern world. What is anticipated with the European civilization that may be identified with western in the 21<sup>st</sup> century?

In order to answer this question let's employ the synergetic principle of subordination and make up a minimum set of adjusting parameters of the order that determine taking of each of alternative virtual scenarios. Selection of groups of such parameters for each of these scenarios is called the joker method.

The forecast accuracy of such method of statistical «weighing» of alternative scenarios follows from the synergetic principle of inversion of future: if civilization begins to evolve towards the chosen scenario, then the self-movement becomes sustainable — the property of attractor to «attracting» close regimes for account of feedback begins to operate.

Following the joker methods, let's replace a real socio-cultural system — western civilization — by its model described by a set of parameters of the order. Leaving out details, let's enumerate these parameters:

- energetic (determines the level of material well-being);
- ecological;
- economic (describes the technological infrastructure);
- population (characterizes changes in the demographic situation);
- stabilization (determines a GDP share being spent for geopolitical stabilization).

All parameters of the order are recorded in a dimensionless form. The results of the synergetic forecast of evolution with respect to the western civilization for a period to 2050 are given in [table 15.4](#).

The last column of this table contains the estimation result of a relative probability with respect to the implementation of alternative scenarios. The accuracy of such estimation makes 10–15%. It should be taken into account that they are of probable nature and relate not to the real western civilizations, but to its synergetic model.

At the same time, assessing the forecast, there should be observed: the chances for a favorable future of the western civilization are not very high — not more than 50% (scenario 1 and 6). However, in case of scenario 1 such well-being is not more than a model of a delayed catastrophe: it is likely that beyond the forecasting period there will begin sliding into one of the deadlock scenarios.

Futurosynergetics does not give an answer to the question whether the intellectual elite of the West has enough knowledge, sense of

responsibility and luck to implement in practice a transition to sustainable future. At the same time we may get a univocal answer not to a less clear-cut question: the continuation of the course of liberal transformations induced by western strategists and launched in Russia by the reformers like **E. Gaidar** and **A. Chubais** and continued by **G. Greff**, **A. Kudrin** and **Zurabov** now is leading Russia to a historical deadlock. At best the country will finally turn into a resource and raw material appendage to the developed countries, and at worst — it will lose its state integrity, and the Russian people will vanish as a nation.

The principle of «minimization of the state» professed by our liberal-reformers runs counter to the system regularities of futurosyrnergetics. One cannot deprive the state of its governing and creative role.

#### **15.4.7. Eurasian Civilization**

One more lesson of futurosyrnergetics: one must not forget that Russia is not only a great power, but the heart of the Eurasian civilization. With the departure of Russia from the historical area it will also disappear.

The Eurasian civilization has existed for millennia; therefore it is difficult to imagine that it could be destroyed. Too large spiritual and intellectual potential is accumulated; feedback is too strong and wide to pass into nothing at once.

The oligarchs, who became rich in the turbulent 90s and robbed national endow and hid the capitals stolen from people in the western banks, corrupted officials and crime, are all interested in the continuation of the former course of reforms detrimental to Russia. They will be vehemently resisting the attempts to change anything. President **V.V. Putin** says many good words, but they are converted into a reality badly. An old aphorism could be cited: the suite plays the king.

In order to win finally, this «suite» should not also master the electorate at the next elections using all might of the venal mass media, but overcome the national character and national mentality. They should erode from the memory of the Russians all that was transmitted by their ancestors and drub folkways and customs of western civilization alien to them into the heads of our nationals.

They exert every effort to do so. However, futurosyrnergetics maintains: their attempts are doomed to failure. Contemporary civilization has the highest level of stability and its security — is exclusively rich culture. Let's recall the definition of the Encyclopedia Britannica: the sphere of human activity embraced by culture is language, morals and customs, historical memory, economy, socio-political system, religion,

art, science, technology etc. Space and time of evolution of the culture constitute various strategies of human being. Culture is its basis, on which civilization is formed as a certain stage in the development of human socium. The research into evolution of civilizations in terms of synergetics implies their inclusion in a higher system – culture.

Many ancient civilizations passed into nothingness leaving nearly no traces after them. They had high culture in terms of their historical period, but it is even impossible to compare with the state that characterizes the modernity. It is the major reason of high stability of modern developed civilizations.

But the reason that a deep remaking of our civilization according to western examples is impossible is also here. We are different. The West embraced Christianity from Rome, Russia – from Byzantium. The western protestant culture formed on the waves of the Reformation and Enlightenment. There was no Reformation in Russia, and the fruit of the Enlightenment of the 18<sup>th</sup> c. was embraced only by minor intellectual elite, and also in its own way. The history of Western and Eurasian cultures also differed considerably both in the 19<sup>th</sup> and 20<sup>th</sup> cc. What are the grounds then for our liberal reformers and their masters from the headquarters of the world financial oligarchy to believe that they will succeed in turning the course of history? It might be done only one way – to complete the program of genocide of the Russian people that has already been launched.

Hence it incidentally follows in what form our national idea that is much spoken about now in the patriotic press should be written down. A well-known Russian statesperson of the 18<sup>th</sup> c. **I.I. Shuvalov** put it quite laconically: saving of the nation. A truer word was never spoken!

National economists have elaborated business programs for revival of Russia and transition to the scenario of sustainable development as an equal partner on the world global market. These programs were published and are well known. There are forces in the country who are interested in changing policy and implementing exactly these programs. The main point: the very movement towards this direction is in line with historical interests of Russian and the Eurasian civilization as an integral self-developing system.

#### **15.4.8. Freedom or Necessity?**

The issue of the freedom of the will occupies the central place in forecasting of the course of history. In the philosophy of history the fundamental questions are set in this connection:

➡ how rigid are the cause-and-effect relations, whether they depend on the will of people?

➡ how the contradiction «freedom of the will is necessity» is solved? what restricts freedom?

➡ whether objective regularities of socio-cultural dynamics exist? what mechanism of their manifestation?

Classic world outlook gives the following answer: «Freedom is perceived necessity». Based on it the classics of Marxism-Leninism formulated an ethical maxim: «All is moral that fosters the victory of socialist revolution». It is impossible to forget to what consequences the implementation of these principles brought about.

A liberal alternative to such extremes also proceeded from the assumption that the historical process has a univocal determinacy. Being inspired by the iron laws of the Newton's classic mechanics **A. Smith** enunciated the postulates of atomic structure of society and «invisible arm of the market», which balance business life by analogy with the law of gravitation. **T. Hobbes** compared human emotions to

Table 15.4

**Scenarios of Evolution of the Western Civilization**

<b>№</b>	<b>Scenarios</b>	<b>Characteristic Features</b>	<b>Probability of Implementation</b>
1	Maintenance of current position	Control of financial capital and TNC High level of GDP. Political stability	0.30
2	US hegemony over the world	The Pax Americana strategy Technological leadership of America. Acceptable level of expense for geopolitical stabilization	0.08
3	Split of world civilization	New centers of force. Exhaustion of stabilization opportunities. Terrorism. Local wars	0.20
4	New Middle ages	Population explosion in the Third World. Financial collapse of the West Technological braking. A loss of socio-cultural unity by the West	0.08
5	Ecological catastrophe	Loss of stability of biosphere. Depletion of natural resources. Global change of climate. Mortality rate growth	0.15
6	Noospheric-post-industrial-transition	Partnership relations between civilizations. A breakthrough in science and technology. Society of learning. New principles of world outlook and ideology	0.19

mechanical impulses, and **J. Locke** suggested the principle of distribution of powers. In his turn **K. Marx** introduced the postulate of economic determinism. The millennial conception of the communist future proposed by him is of a univocally fatalistic nature.

Futurosynergetics offers other answers to the fundamental issues of life. The foundation of its world outlook is a philosophical paradigm of non-linear thinking. It means a renouncement of the principles of simplicity, reductionism, linear approximation, univocal Laplace determinism traditional of science of New Time. The foundation of non-linear thinking is alternative postulates of the theory of self-organizing systems: openness, adjustment for non-linear effects, coherence, i.e. systemic self-consistency, and also co-evolution of historical patterns.

Accepting the paradigm of the non-linear thinking, we renounce the fatalistically univocal interpretation of cause-and-effect regularities. The real course of historical events is governed by bifurcational principles. Therefore the answer to the question about the freedom of will sounds anew: the freedom is the opportunity to choose from alternatives and responsibility for such choice.

The latter statement is of fundamental significance for futurosynergetics: ethical factor that was of an external and directive nature from a classic viewpoint now becomes an organically integral element of the activity of historical actors.

Future is not heaven-born and not dictated by fatalistically determined algorithms of historical development. Socio-cultural regularities exist, but they manifest themselves in alternatives of the bifurcational course of history. Therefore the historical actors are able to reverse the evolution vectors towards the optimal scenario. Success depends on their competence, sense of moral duty and responsibility.

## Chapter 16

# RUSSIA IN GEOCIVILIZATIONAL SPACE OF THE 21<sup>st</sup> CENTURY

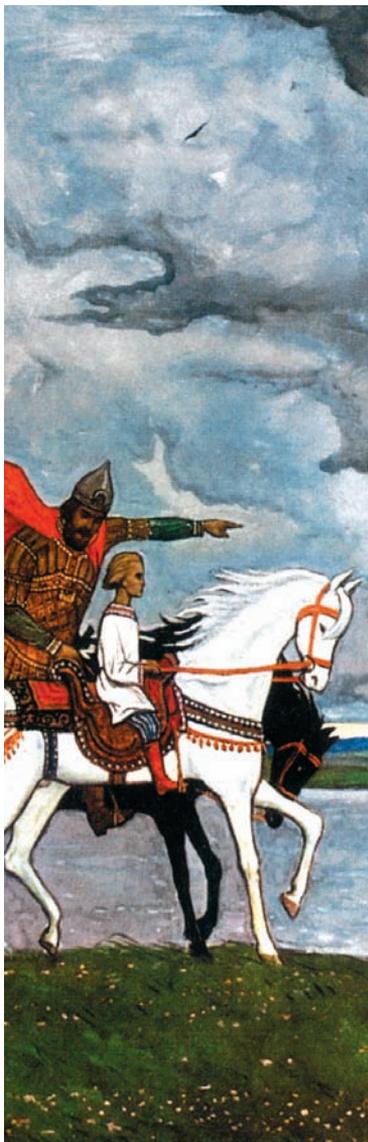


**C**hapter 13 addresses the new stages in the civilizational dynamics in the North of Eurasia, fates of the Eastern Slavic and Russian, Eurasian civilization. Now our task is to investigate the future of Russia within framework of the forming fifth generation of local civilizations. Let's apply the method of a situation analysis and forecast modified in the context of the specifics of tasks being solved and continuation of the results of the researches on the history and future of Russia published before [99, 101] and a forecast of the innovative development of the world and Russia [103].

In the present chapter a collection of materials is prepared with the financial support of the Russian Humanitarian Scientific Fund (the RHSF), grant 04-02-174a «Methodology of Forecasting of Cyclical Dynamics of Russia».

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## **16.1. Situation Analysis and Forecast of Geocivilizational Dynamics of Russia**



**T**he method of a situation analysis and forecast is often applied in researching the ways to handle critical situations that have formed in the geopolitical and geoeconomic dynamics, and also in the instance of brewing or evolving military conflicts. This method permits to involve the top-experts in order to identify and evaluate possible scenarios to overcome crisis situations.

The methodology that has been worked out by us is suggested for analyzing and forecasting critical situations in the dynamics of the Russian civilization and its relations with other civilizations. **What are the main points of this methodology?**

1. In this case, the objective of such situation analysis and forecast is to identify **a cluster of critical situations** that determine the dynamics of the Russian civilization in the 21<sup>st</sup> century against global civilizational transformations, to outline possible scenarios for solving such situations, to suggest and evaluate the ways of development according to the optimal (scenario of revival) trajectory, to strengthen positions in the system of local generations of the fifth generation.

2. On this basis the main *factors* that make the components of the genotype of a local civilization and that determine the critical situations formed and scenarios of further development of Russia and its place in a geocivilizational space are investigated:

➔ *demographic* – causes and possible tendencies of depopulation, its impact on the age structure and innovative activity of population, dynamics of health, mortality and fertility, ways to temper and overcome depopulation, solution of aggravated problems of migration, demographic pressure of allied civilizations, strengthening of people's health, opportunities to improve positions in a geodemographic space;

➔ *natural-ecological* – problems of support of the Russian civilization with natural resources (especially energy) and ecology of the environment, scenarios and possible measures for overcoming a shortage of resources and improvement of the environmental situation in the context of the Kyoto Protocol, intensity of natural-ecological, including energy, interconnection between other civilizations;

➔ *technological* – problems of a technological degradation of economy of our country and a fall in the competitiveness, scenarios for Russia's future in the context of the formation of the sixth technological order, accidentance to WTO, opportunities and ways for the pursuance of the strategy of an innovative breakthrough, change of Russia's place in a global technological space;

➔ *economic* – preconditions and opportunities to ensure high GDP growth rates, investments and the level of life of population, coming economic crisis and ways to handle them, matters pertaining to the overcoming of a structural degradation and social polarization, convergence of the development levels of branches, regions and social strata; development scenarios of foreign economic ties with other civilizations, change of the position in a geoeconomic space;

➔ *state-political and geopolitical* – critical situations in the field of political and state-legal dynamics, opportunities and ways to ensure social-political stability and enhance the role of the state, in particular its strategic-innovative function; scenarios of geopolitical dynamics and Russia's place in the unipolar, bipolar or multipolar world, dynamics of armed forces and export of weapons;

➔ critical situations and development forecast of a *spiritual sphere* – science, education, culture, ethics, religions, ways to maintain and transmit the system of civilizational values to other generations. The main task in this field is to answer the question: could

Russia be one of the centers for the formation of an integral socio-cultural system and how could it be done?

**3. The analysis of critical situations** and forecast of their development and settlement has a quantitative nature and is based on Delphi approach. And in doing so the Russian and foreign statistical and forecast figures, UN materials and materials of the World Bank and other international organizations are applied. The analysis and forecast of cross-sectoral and cross-civilizational relations have been made using a reproduction-cyclical macro model and geocivilizational model described in the treatise «Russia – 2050: Strategy of Innovative Breakthrough» [103, appendices 3 and 4]. The Delphi methods, cross-country comparisons are applied. This permits to identify the rhythms of cyclical dynamics of the Russian civilization in their interaction and synchronization with global rhythms.

**4.** A situation analysis and forecast is made with the involvement of a group of **qualified experts** – key specialists in the relevant field. It expresses opinions and assessments on possible development of civilizational dynamics, components of the genotype of a local civilization and factors that determine this development and place in a geocivilizational space and it is intended for the application of such assessments and opinions obtained for the substantiation of the strategy of a socio-economic and innovative-technological development of Russia in a long-range prospect, strategies of interaction with other civilizations in the context of tendencies towards possible transformations of a geocivilizational space for an outlook up to 2050. The outputs express a collective opinion of this group of experts.

**What are the specifics of the suggested methodology** against the methods of the situation analysis being traditionally employed?

**1.** The identification of the **cluster of critical situations** and possible ways to resolve them is connected with a long-range forecast of dynamics of the Russian civilization for a semi-century period and its interaction with other civilizations of the fifth generation under these two extreme scenarios – the revival or vegetation and a possible decay of the Russian civilization. The situation analysis and forecast gain a clearly-defined space, temporal and contents framework thereby.

**2.** A situation analysis and forecast are made on the basis of a **geocivilizational model**, the methodology for construction and application of which is described in the treatises «Globalization and

Interaction among Civilizations» [239, §1.7] and «Rent, Anti Rent and Quasi Rent in a Geocivilizational Dimension» [244, chapter 8], and the experimental use is described in the treatise «Russia – 2050: Strategy of Innovative Breakthrough» [103, appendix 1]. For analysis and forecast of the dynamics of the structure of economy a reproduction-cyclical macro model is applied, which has already been used for analysis and forecast of dynamics of the structure of economy of global and Russian civilizations in the 21<sup>st</sup> century [239, 277] and for estimation of possible scenarios of the structural dynamics of economy and foreign trade of Russia for an outlook up to 2050 [103]. The use of macro models permits to identify cross-civilizational interrelations and structural shifts more clearly in two scenarios referred to above.

The advantages of a geocivilizational model is that it is multi-dimensional, permits to disclose the interactions in the dynamics of local civilizations in six aspects (demographic, natural-ecological, technological, geoeconomic, geopolitical and socio-cultural) and for 12 local civilizations of the fifth generation (four western, five eastern and three mixed) and in a temporal aspect – a semi-century in a retrospect and five decades in prospect (*fig. 16.1*).

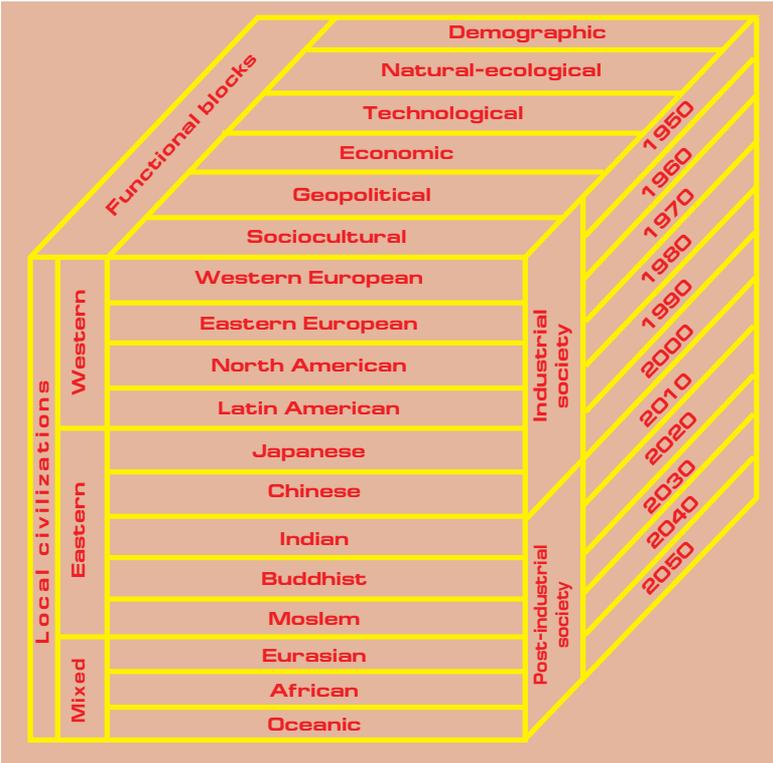
**3.** For the first time in practice of a situation analysis a *differentiated and integral estimation using point-counting technique* is applied to the situation of Russia in a geocivilizational space in retrospect (from 1950) and in prospect (up to 2050). For each factor (a block of a geocivilizational model) and its major components and each decade the experts give a quantitative estimation (forecast – in two extreme scenarios) where the highest point is 10. Then the points are added by each temporal interval; we get an integral arithmetical average thereby (also, integral for each factor) of the dynamics of Russia's place in a geocivilizational space for a century where the outlook up to 2050 is given in two scenarios – optimistic and pessimistic.

It is clear that the said estimations express subjective opinions of this group of experts and may provoke a discussion, which is welcomed. However, it is important to identify and estimate quantitatively the trends in change of Russia's position in a geocivilizational space and possible changes in future under evolving globalization, technological overturn and formation of the fifth generation of local civilizations.

**4. The model is open** and allows doing more detailed estimations by the components making up the block of the model. For example,

Figure 16.1

**Structure of Geocivilizational Model**



four components are spoken about in the socio-cultural block – science, culture, education, ethics, religion and ideology with a differentiated estimation in general by the block. For the natural-ecological block integral estimation is made on the support with natural resources and ecology (it is also possible to specificate the component of natural and technogenic catastrophes).

The suggested methodology of a situation analysis and forecast of dynamics of a local civilization and its interaction with other civilizations has been worked out and applied experimentally for the first time, and it may be further perfected.

A situation analysis and forecast have permitted to identify and estimate quantitatively the critical situations formed and prospects of their possible solution in the period up to 2050 based on two

aspects: development of Russia (up to 1991 — as the nucleus of the Eurasian civilization) and its place in a geocivilizational space.

*Table 16.1* includes the outputs of expert judgments; *table 16.2* — the tendencies of Russia's dynamics and its place in a geocivilizational space by each of six factors (blocks of the geocivilizational model) for a century; *fig. 16.2* — an integral estimation as arithmetical average by 6 factors for the same period (forecast — in two scenarios).

**What are the general results of expert estimations** of the major factors of Russia's dynamics for 50 years in retrospect and 50 years in prospect and its place in a geocivilizational space?

**1. The tendency towards an essential fall of estimations by factor and integral estimations** has been identified, especially by the end of the 20<sup>th</sup> century. Even under the optimistic scenario of the forecast no figures of the 50s–60s years will be reached when the Eurasian civilization was in the heyday of its life cycle. The integral indicator of 2050 will make 91% by 1950 and 81% by 1970; under the unfavorable scenario this indicator will make 25% only by 1950 and 23% by 1970, which will transfer Russia finally to the third echelon of civilizations and may lead to its actual division between other civilizations. This will mean the fifth and possibly final civilizational catastrophe in the north of Eurasia. The local civilization that was once one of the world leaders will finally leave the historic scene, turn into, as **Pitirim Sorokin** put it, the «ethnographical material and fertilizer» for other civilizations.

The leadership of the country, present and future generations should be aware of these tragic but quite real tendencies being formed from the end of the 20<sup>th</sup> c. and which may persist in future, so that they could work out and pursue the strategy that would permit to prevent a threatening catastrophe and implement a positive scenario while it is not too late.

**2. Demographic, technological and economic factors render the most essential influence on Russia's geocivilizational dynamics.** It is suggested by the figures of *table 16.2* and *fig. 16.2*.

The demographic factor renders the strongest negative influence on the integral index. Under a positive scenario for future it will be the most considerable restrictor (52% to the integral indicator). Under a negative scenario its deviation from the general dynamics will be considerably less.

The dynamics of a natural-ecological factor is demonstrative. Before 1990 its value exceeded the integral indicator by 4–10%. However, the crisis of the 90s increased its excess up to 64% and

Table 16.1

**Expert Judgment of Russia's Place in a Geocivilizational Space**

	<b>Blocks, Models and Their Components</b>	<b>1950</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>Scenario</b>	<b>2010</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>
1.	<b>Demographic</b>	65	69	68	58	53	38	a	36	33	37	37	40
								b	31	27	23	20	17
1.1.	Population dynamics rates	72	75	75	6	5	3	a	3.1	3	4	2	2
								b	25	2	2	3	2
1.2.	Structure of population	62	7	7	63	6	5	a	42	4	3	3	2
								b	39				
1.3.	Migration	6	63	6	52	5	35	a	32	4	4	4	5
								b	30	3	3	3	2
2.	<b>Natural-environmental</b>	74	77	80	74	70	72	a	69	6	65	55	55
								b	61				
2.1.	Natural (support with resources)	73	82	9	83	82	76	a	76	6	6	5	5
								b	68	5	5	4	3
2.2.	Ecological (pollutions)	75	72	70	65	58	67	a	62	6	7	6	6
								b	54	5	5	4	3
3.	<b>Technological</b>	49	63	71	63	52	31	a	35	43	50	62	68
								b	27	23	19	17	13
3.1.	Technological level	6	8	82	7	6	32	a	36	45	56	67	73
								b	28	24	29	23	15
3.2.	Competitiveness	5	6	7	6	48	3	a	34	45	54	62	68
								b	28	20	27	13	13
3.3.	External technological ties	38	5	6	6	5	3	a	34	40	51	56	63
								b	25	21	28	16	13
4.	<b>Economic</b>	60	73	78	72	59	35	a	34	40	54	62	67
								b	30	26	2	1.9	1.5
4.1.	Level and growth rates of GDP	67	78	80	7	56	34	a	42	50	56	67	69
								b	33	31	26	21	1.8
4.2.	Structure of economy	53	68	78	72	61	41	a	40	45	56	61	70
								b	31	27	23	21	1.7
4.3.	Foreign economic ties	52	67	78	71	54	38	a	40	45	52	61	66
								b	33	27	24	1.9	1.4
4.4.	Level and differentiation of income of population	67	78	78	73	64	28	a	34	41	50	56	63
								b	23	20	17	14	12
5.	<b>State-political</b>	81	83	79	70	58	42	a	46	53	58	62	68
								b	36	34	27	23	1.8
5.1.	Political system, role of the state	62	78	79	68	-66	4	a	42	55	58	63	68
								b	32	31	27	23	1.8
5.2.	Socio-political stability	82	78	74	60	41	49	a	56	62	67	71	78
								b	41	37	31	26	21
5.3.	Geopolitical influence	89	86	75	71	56	40	a	42	47	54	59	65
								b	34	30	25	21	1.7
5.4.	Armed forces	90	89	88	82	70	41	a	43	48	53	57	62
								b	37	31	27	23	1.8
6.	<b>Spiritual field</b>	73	81	75	68	63	47	a	50	57	62	68	74
								b	40	36	31	25	22
6.1.	Science	78	89	88	78	73	52	a	53	58	64	71	76
								b	41	35	30	25	20
6.2.	Education	79	82	78	67	64	51	a	56	61	67	72	78
								b	45	42	37	34	288
6.3.	Culture	68	78	71	67	61	52	a	55	60	68	72	80
								b	47	43	37	32	29
6.4.	Ethics, religion, ideology	67	72	64	56	54	33	a	37	45	51	57	63
								b	29	25	21	17	13
7.	<b>Arithmetic average integral estimation</b>	67	74	75	68	50	44	a	43	48	52	54	61
								b	38	33	28	25	17
7.1.	In % to the previous period	100	110	112	101	75	66	a	97	112	108	108	113
			110	101	90	88	73	b	86	87	85	89	68

\* Highest points for each block and component – 10; integral estimation – a total of estimation by blocks; estimation by each block – arithmetic average by components; forecast in two extreme scenarios – optimistic (*a*) and pessimistic (*b*).

Table 16.2

**Comparative Dynamics of Estimations by Factors and Integral Estimations of Russia's Geocivilizational Dynamics (in % of Integral Estimation)\***

Factors	1950	1960	1970	1980	1990	2000	Scenari	2010	2020	2030	2040	2050	Max n Min
Demographic	97	93	91	85	98	86	a	74	67	58	56	52	188
							b	82	82	92	84	94	120
Natural-ecological	110	104	107	109	117	164	a	147	131	112	106	95	173
							b	161	159	164	160	182	175
Technological	73	85	95	93	87	70	a	100	90	86	115	11	164
							b	71	70	68	68	76	137
Economic	90	99	104	106	98	80	a	93	93	104	112	110	140
							b	79	79	79	76	82	139
State-political	121	112	105	103	97	95	a	123	110	112	112	111	127
							b	95	103	96	96	106	126
Spiritual sphere	109	109	100	100	105	107	a	116	119	119	126	121	126
							b	105	104	111	108	129	124
Integral indicator	100	100	100	100	100	100	a	100	100	100	100	100	
							b	100	100	100	100	100	

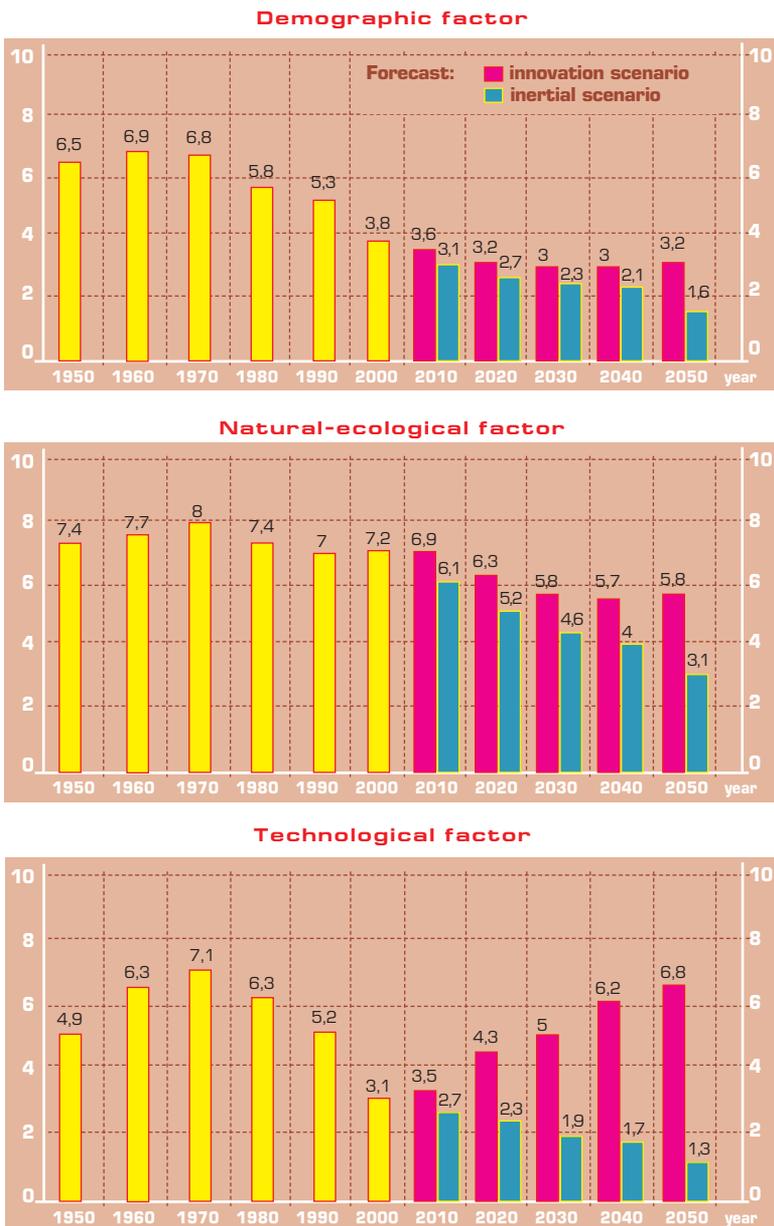
\* Forecast: *a* – optimistic scenario, *b* – pessimistic

under a negative scenario it will be a factor of prime importance, which could keep Russia to «stay up» in a geocivilizational space (an excess of 158 to 182%). However, under a positive scenario its role will be falling, and by the year 2050 its deviation from an integral indicator will become negative value (–5). A technological factor will become the engine of progress if the strategy of an innovative breakthrough is implemented, and the sixth technological order is assimilated in a timely manner and on a large scale and the competitiveness of national products improved. A deviation of this factor from an integral estimation with minus 30% in 2000 will change to plus 15% in 2010 (a certain hang in future in mastering of the seventh technological order is possible). This will catch up with the significance of an economic factor (from 80% in 2000 to 112% in 2040). However, under a pessimistic scenario, if the orientation for the inertia-based market strategy persists, a technological lagging will increase, which will tell negatively on an economic factor.

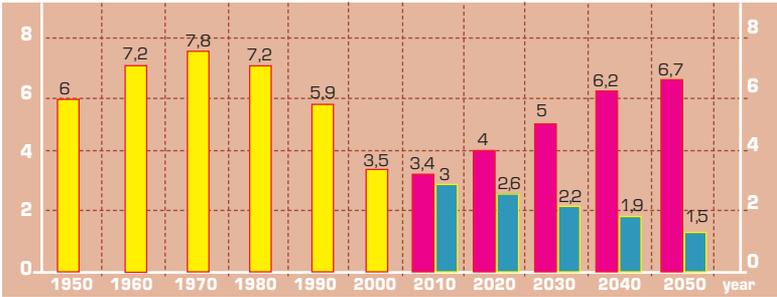
The influence of a state-political factor and a spiritual sphere will turn to be the most stable, where the latter increases an integral indicator under both scenarios (under an optimistic scenario by 19–26%, under pessimistic – by 4–29%). This indicates a relatively high spirituality of the Russian (Slavic) civilization, its ability to find the responses to the challenges of our century.

**3.** It follows from the factor-based forecast that *the major breeding grounds, where a positive scenario of the forecast is imple-*

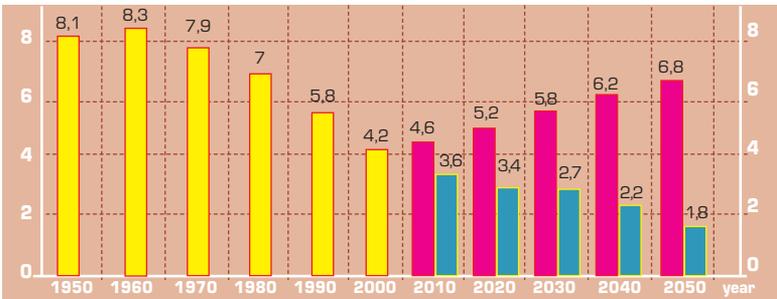
Figure 16.2  
**Dynamics of Russia in a geocivilizational space by major factors**



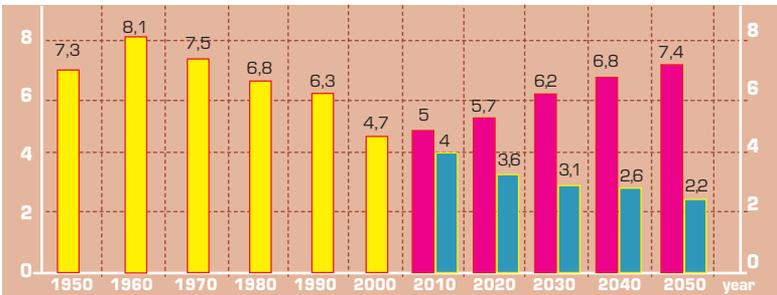
**Economic factor**



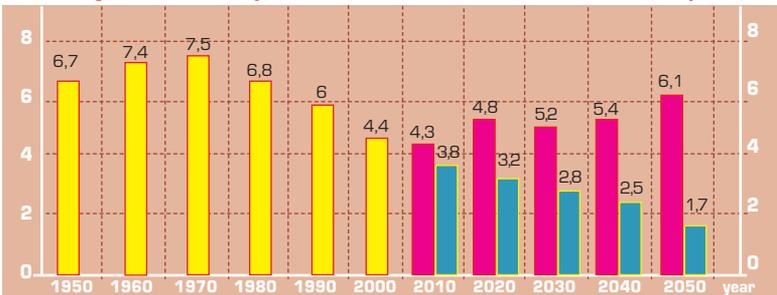
**State-political factor**



**Spiritual sphere**



**Integral Estimate of Dynamics of Russia's Place in a Geocivilizational Space**



***mented and a civilizational catastrophe is prevented, are the spiritual sphere and a technological factor and that the main danger to Russia's future is hidden in a demographic factor, accelerating depopulation.***

Consequently, a long-range policy and strategy of the state that is responsible to past, present and future generations should be orientated first of all to three major objectives:

➡ *every possible support to a spiritual sphere*, and first of all science and education in order to establish a necessary scientific-technological reserve for an innovative breakthrough and support it with qualified human resources creatively orientated;

➡ *ensure an innovative breakthrough*, bridging an increased technological lagging from the vanguard civilizations and a critical ageing of stock capital in order to ensure the improvement of competitiveness of national products, enhancement of the structure of economy and sustainable economic growth;

➡ *the pursuance of an active differentiated, socio-demographic policy* ensuring the improvement of population's health, reducing mortality and increasing fertility, reducing the depopulation rates, providing an efficient influx of migrants, large-scale support of the social sphere by the state.

Let's dwell on a more specific evaluation of the results of a situation analysis and forecast to identify the cluster of critical situations that have formed in Russia and its relations with other civilizations by the beginning of the 21<sup>st</sup> c. and to determine possible solutions for such critical situations.

## **16.2. The Cluster of Critical Situations in Dynamics of Russia by the Beginning of the 21<sup>st</sup> Century**

At the end of the 20<sup>th</sup> — beginning of the 21<sup>st</sup> c. transformational processes have intensified many times in a geocivilizational space. Both space itself has radically changed and especially the place of Russia. It has suffered the fifth catastrophe over more than its millennial history, separated from its co-brothers in the Eurasian civilization and has finds itself in situation which is getting more and more unfavorable every year. Moreover, Russia risks staying in isolation among local civilizations of the fifth generation, many of which have notably stepped up their activity in the period of transforma-

tions. The world has become loose, unstable again. The cluster of critical situations of the beginning of the 21<sup>st</sup> century and their nature differ considerably from the cluster of critical situations of several decades ago. Similar changes occur in critical transitional periods – either regularly recurrent (in the change of world civilizations) or in global upheavals like world wars of the 20<sup>th</sup> century.

We'll try to picture the cluster of critical situations that will determine the civilizational dynamics on a global scale and the place of Russia in it in the first half of the 21<sup>st</sup> century proceeding from the classification of factors we've suggested (the blocks of a geocivilizational model) and using the results of the situation analysis of the dynamics in the second half of the 20<sup>th</sup> c.

**1. Demographic factor.** The tendencies of the demographic dynamics differ radically from the tendencies of the second half of the 20<sup>th</sup> c. both in the world and Russia. If then a global *population explosion* was observed (average growth rates of 1.8% to 1% in the world in 1900–1950, and developing countries – 2.1% to 1.1%), a reverse process has been observed since the end of the 20<sup>th</sup> c. Thus in 1995–2000 the average world population growth was 1.35% and if the tendency towards the decline of population rates prevails, it will fall to 0.33% in 2045–2050. In an increasing number of countries the depopulation and aging processes is evolving.

A global critical situation is in the increase of a demographic gap between the countries with high population growth rates (many of them are poor countries) and a small number of countries with a declining population both developed (Japan, Italy, Germany etc) and post-socialist and developing (Russia, Ukraine, South Africa, by the middle of the century – China etc). By the end of the 21<sup>st</sup> c. the tendency towards depopulation might overrule in general worldwide, which threatens with aging and degeneration of the human.

In Russia, which was characterized in 1950–1990 by moderate population growth rates and its natural increase due to internal sources the outflow of population to other republic of the USSR, the direction of tendencies of the demographic dynamics has changed sharply since the 90s.

While comparatively high natural increase rates of population were observed in the first post-war decades permitting to exceed the pre-war number (in 1950–1955 the birthrate made 24.7% per 1 000 people, 1.73% estimation by points of a demographic factor increased from 6.5 in 1950 to 6.8 in 1960), then the tendencies towards worsening of the demographic situation were observed in further decades –

decline in a birthrate from 23.2 per 1 000 people in 1960 to 17.2 in 1986, mortality growth from 7.4 to 10.4, natural growth decrease from 12.4 to 6.8 – nearly double. The turn of the tendency occurred in 1992 when the birthrate declined up to 10.7, and mortality increased from 12.2, and a natural growth was replaced by the decline. It was increasing from year to year reaching its maximum in 2000 (birthrate – 8.7%; mortality – 15.3%; natural decline – 6.6). An average anticipated life span decreased (from 69.2 years in 1992 to 64.8 in 2001), the situation with health worsened, the mean age increased from 31.3 in 1990 to 36.7 in 2000. One of the main reasons of such turn in tendencies is neoliberal market reforms and a leap from socialism to «wild» capitalism accompanied by a sharp worsening of the level and quality of life of the majority of population, a loss of confidence in future of families, crime wave, discontinuance of support by the state to the sectors of population economically exposed.

While at first the natural loss of population was partially covered by intracivilizational migration from the former republics of the USSR (in 1994 1146.7 thous. people came to Russia, including from the CIS and Baltic countries – 1146.3 thous.), then the number of immigrants reduced sharply further on and made in a total of 129.1 thous. people in 2003 (including from the CIS and Baltic countries – 121.5 thous.)

The integral estimation of the demographic factor in Russia as compared with the world tendency reduced from 6.5 in 1960 and 5.3 in 1990 to 3.8 in 2000. This tendency got its even stronger expression in Ukraine, weaker – in Byelorussia. A Slavic civilization has found itself in the state of depopulation, extinction.

The following **critical situations** have formed in this sphere:

➔ *increasing depopulation rates*, natural loss of population due to a decline in the birthrate and fertility (from 2.5 in 1950–1955 and 2.02 in 1965–1970 to 1.50 in 1990–1999 that is not enough for a simple reproduction of population), worsening of health and growth of mortality, a decrease or stagnation of an anticipated mean life span – against the background of a further continuation of population growth in many civilizations; a rapid fall of Russia's share in the population of the world (from 4.5% in 1950 to 2.3% in 2003), especially as compared to the Indian, Chinese, Moslem, African and Latin American civilizations;

➔ *worsening the age structure* of population as a result of a considerable increase in the mean age of population, an increase in

the share of middle age and a decrease in the share of people in the innovative active age, an increase in a demographic load on able-bodied population. Similar tendencies are observed in some other civilizations, but in Russia these tendencies are more intensively expressed as compared to the world dynamics. Russia's population is becoming less able and more conservative (similar tendencies are observed in the Japanese and Western European civilizations);

➡ if in the 60–80s *emigration* was considerably small and one-way directed (Jews, Germans – to the USA, Western Europe, and Israel), then from the 90s the picture changed: the inflow of immigrants from the CIS countries, China, Afghanistan and Syria increased many times. At the beginning of the 21<sup>st</sup> c. the scales of migration flows officially registered have reduced. But the number of illegal immigrants from the CIS countries, China, Viet Nam and North Korea has increased. Where the people with high level of qualification emigrate from Russia, immigrants (especially illegal) are mainly with low qualification, which worsens the quality parameters of manpower in Russia. An especially grave situation is being formed in Far East and Moscow where the enclaves of other civilizations are being established. And also a share of Moslem population is growing within the country, especially in the Southern federal district. The country becomes more and more poly-civilizational, a share of the Russian population is declining – from 81.5% according to the census of 1989 to 79.8% according to the census of 2002.

Consequently, the **first critical situation** for a forecast of demographic dynamics in Russia and its place in the geodemographic civilizational space is in the following.

***Whether in the coming half a century Russia would succeed in overcoming or at least smoothing the tendencies of depopulation, birthrate and fertility falling and growth of mortality of population, fast aging and a fall of an innovatively active population, filling in releasing space with a flow of immigrants from the CIS countries and neighboring civilizations – tendencies that put in jeopardy the ability and integrity of Russia in a geocivilizational space of the 21<sup>st</sup> century?***

**2. Natural-ecological factor.** Of 12 local civilizations of the fifth generation, the Russian one is supported to the fuller extent with natural resources that are necessary for an economic growth and life activities of people: mineral (gas, oil, coal, ferrous and some non-fer-

rous metals, agricultural ores), forest, land and water. Here there are 31% of world reserves of natural gas, a considerable portion of oil and coal reserves; a ploughland makes 24.7% of the world average per capita, sweet water resources — 35.5% . Russia is in the position of a resource donor for other civilizations (first of all, for Western European, Japanese and Chinese), which enables it under high world prices to generate a world natural rent on a considerably tremendous scale. The latter becomes a source of the GDP growth, budgetary revenues, currency reserves of the Central Bank, stabilization fund of the government, super profits of Russian and transnational corporations operating in this sphere, and also for comparatively high income of employed in the sectors engaged in production, refining, transportation and export of natural raw material. This predetermines a comparatively high estimation (from 7 to 8 points in 1950–2000) of this factor.

However, in this block an extremely dangerous critical situation is growing up, determining the future of the Russian civilization in many ways.

Firstly, *the reserves of the main source of income — oil and gas resources* — are non-renewable, the best deposits are fast to deplete, and are not compensated for in full by an increase in explored reserves. The present generation lives on credit of future generations and the size of such credit increases. Many mineral deposits are developed predatory, well located forest areas are deforested, a considerable part of agricultural lands is taken out for other purposes or remains non-farmed, soil fertility falls as a result of a sharp decrease in applying organic and mineral fertilizers. In two-three decades the opportunity to support a socio-economic development of the country with its own resources will decrease considerably, if radical measures are not taken to save resources, replace fossil fuel with renewable sources of energy, expand geologic exploration, melioration of lands, development of forestry, water management, fishery, an upswing in agriculture.

Secondly, *Russia's economy, its mining sector is in dangerous dependency on the world market conditions*, level of world prices for natural raw materials and fuel. One should remember that the crisis and dissolution of the USSR at the end of the 80s–90s, default and deepening of economic crisis in 1998 were determined in many ways by a fall of world prices for mineral fuel — the main item of the Russian export. A salutatory growth of world prices for energy sources in the recent years that brings huge super income to Russia,

concurrently serves as an impetus to the development of hydrogen power engineering and the use of other renewable sources of power that will become if not prevailing in the middle of the century, then a large source of power rapidly growing. This will fundamentally change the situation on the world power market. While Moslem, Eurasian and Latin American civilizations occupy the monopolistic position here now, then in prospect the leadership will pass to high-tech civilizations in a global power sector — North American, Western European and Japanese. And this will inevitably lead to a fall in demand for hydrocarbon material and consequently prices for it. If such future threat is not taken into account in a timely manner, in 30–40 years (and maybe earlier) Russia will turn out to be without an outside source of its revenues and development (also in the context of the depletion of paying mineable reserves and a growth of internal fuel consumption).

Thirdly, a one-sided mineral-energy raw material-based structure of economy makes it increasingly inertial, non-efficient, being a source of growth of costs and prices as production, refining and especially transportation of mineral raw material and fuel becomes more expensive. The state-rentier that lives for account of super income from predatory development of large-scale and intensive export of mineral and forest resources is being formed, and also among oligarchic capital the monopolists-rentiers parasitically accumulated capital owing to privatization for nothing the richest natural resources, appropriation (under a flat scale of taxes on mining of natural resources and profit) of the major part of a differential rate and actually being the owners of natural resources, formally owned by the state, play first violin. Even a trickier situation is being formed in the agricultural sector, a share of which is dropping rapidly in the support of the country's demand for foodstuff and agricultural raw materials. A record agricultural crises for a many century history of Russia continues and deepens, the signs of coming energy crisis begin to emerge. One should be prepared in advance for this critical situation.

Another critical situation closely connected with natural-resource is *ecological* showing the level of environmental pollution. In the 70–80s a number of measures intensifying governmental control over efficient management of natural resources and environmental pollution was implemented. Although insufficient, these measures have started to bear fruit; a nature conservation (ecological) sector of economy formed.

With the beginning of neoliberal market reforms of the 90s this environmental mechanism being formed was nearly ruined. While environmental rules were still in the legislation by inertia, but they remained mere declarations. The governmental control over environmental activity was reduced to minimum, sanctions for environmental breaches were nearly cancelled, the rates for compensation of expense for exploration work were abolished (deductions for reproduction of mineral raw material base), and control of governmental authorities over efficient exploitation of natural resources was weakened.

In the first half of the 90s, a tendency towards a reduction of environmental pollution prevailed that was conditioned by an economic crisis, a sharp fall of production in the industry and agriculture. However, from the end of the 90s the economic growth led again to the increase in the environmental pollution. Furthermore, it should be taken into account that the consumption of mineral, forest, water and land resources per capita exceeds considerably the same indicators both in general in the world and for many local civilizations.

Signing the Kyoto Protocol, Government of Russia hoped for additional income from a sale of pollution quotas due to a reduction of emission as compared with the base year 1990. However, this advantage is short-lived. High rates of an economic growth under a lack of a real nature-oriented economic mechanism and a weak governmental control will lead to exceeding the level of 1990 in 5–10 years, and the state will suffer an additional expense in accordance with the operation of the mechanism envisaged by the Kyoto Protocol.

Due to wear of fixed assets in the industry, transport, housing and utilities, the number of technogenic and environmental catastrophes threatening to life and health of population is growing.

Thus, the **second critical situation** in interaction of the Russian civilization with other civilization of the fifth generation may be put as follows.

*How could an exacerbating agricultural crisis be overcome, coming energy and environmental crises be prevented, a number of technogenic and environmental catastrophes be reduced and a worthy place of Russia be maintained in a global natural-ecological space in the context of intensifying tendencies towards depletion of the best mineral, forest, land and water resources and increase in environmental pollution, while combining optimally interests of present and future generations?*

**3. Technological factor.** In the 50–60s the USSR was among the leaders of the world scientific-technological overturn, assimilation and diffusion of the forth technological order. This ensured a high competitiveness of national products – first of all in the military-industrial complex, aviation, nuclear power engineering, space exploration, power-plant industry and power engineering, consumer goods industry and some other industries. However, in the agro-industrial complex and service industry an increasing lagging behind the world's level was observed that was however masked due to monopoly of foreign trade and rare trips of our citizens abroad.

However, from the middle of the 80s the tendency towards a technological degradation against the vanguard countries prevailed. The USSR was behind with the assimilation and diffusion of the fifth technological order in the civil industries, and in the first half of the 90s its share in Russia, not very high even without it, reduced approximately three times. A share of the fourth order somewhat decreased, instead a share of the third (prevailed in the first half of the 20<sup>th</sup> c.) increased sharply, and especially relict (in individual households of population and retail) technological orders. In terms of the technological level Russia's economy was thrown back for several decades ago, its competitiveness fell considerably. Domestic products of manufacturing industries were ousted from both foreign and national markets. A share of Russia in the world export fell nearly two times (it mainly rests on the power sources), a specific share of import goods reached 54% in retail turnover in 1995. The investments decreased five times in fixed capital in 1998 as compared with 1990 that led to a critical aging of fixed assets, especially in the industries manufacturing goods where a fall of investments reached 7 times. It is clear that with such assets economy (except mining industries) can't be competitive. The innovative mechanism was ruined.

As a result the estimation of a technological factor dropped from 7.1 points in 1970 and 5.2 points in 1990 to 3.1 points in 2000. Due to the technological degradation of the 90s, ruining of the military-industrial complex the country lost a considerable part of its scientific-technological potential that under the conditions of the next technological overturn evolving in the vanguard countries turned into a loss of competitiveness of national finished goods, its ousting from national and foreign markets.

The situation began to change from 1999 when the tendency towards priority rates of investment growth to the fixed capital,

export deliveries, a certain revival in the defense-industrial complex, investment machine industry appeared, a number of innovations increased, a share of the fifth order began to grow. However, these are only the first robins that do not make spring. Under conditions of the evolving next scientific-technological overturn in the world Russia's lagging behind the vanguard countries is building up, the competitiveness of agricultural produce, manufacturing industries, social services and housing and utilities continues dropping. These tendencies will especially intensify after Russia will accede to the WTO when the conditions will be established for extending commodities and technological expansion of developed civilizations on the Russian market, its saturation with import goods. In actual fact, the state has abandoned the active innovative policy, support of base innovations. Scientific-technological and innovative potentials are aging and decaying.

It manifests itself more clearly the tendency towards turning Russia into a technologically backward, low competitive power oriented at import of technologies and finished goods with a further growth of lagging in a technological level from the vanguard countries, and in prospect — from the world average level (in the context of a rapid building up of a technological potential by the Chinese, Indian and Latin American civilizations).

The nature of scientific-technological relations of Russia with other civilizations has changed. While in the 60–70s years the USSR had a large sector of the world technological market, it was supplier of machinery, equipment, technologies and weapons of the fourth technological order to the CIS countries and many developed countries, then Russia acts mainly as an importer of equipment and technologies of the fifth order now, and only to a minor extent — as an exporter of equipment and weapons to China, India and CIS countries. A share of Russia is negligibly minor in the world export of high-tech goods, according to the World Bank it made only 0.5% in 2003, and the revenues from export of patents — 0.2% in a total [9, p. 136]. In the years immediately ahead it is anticipated a reduction in demand of China and India for the Russian weapons that places in jeopardy a defense-industrial complex as national orders are not enough for it.

The said allows formulating the **third critical situation** for Russia in a geocivilizational space in the 21<sup>st</sup> century.

*Russia has lost the leading positions in a geotechnological space and a considerable part of competitiveness on the world and*

*national markets, the tendency towards turning it into the third rate technological power with a low competitiveness and ousting of its products (except mining industries) from national and foreign markets, with obsolete fixed assets, if the strategy of an innovative breakthrough, innovative renovation of economy based on modern fifth, and in prospect – sixth technological orders, enhancement of significance in a global technological is not implemented.*

**4. Economic factor.** One could emphasize the components of a critical situation connected with a considerable fall of Russia's share in the world GDP, worsening of the structure of economy and foreign economic ties, many time increase of the gap in income of the rich and poor sectors of population.

In the 50–60s the USSR's economy developed at rates considerably exceeding the world average, its share grew from 11.1 in 1950 to 14.5% in 1960 in the world economy, and the level of GDP per capita exceeded twice the world average. However, in the 70–80s the signs of stagnation and *a fall of Russia's share in the world GDP manifested itself, and in the 90ies – a rapid roll back, a 2.4 time fall of this share*, lagging from the world average level of economic development – by GDP output per capita by 23%. This was a deep-seated, unprecedented economic crisis for peace time.

From 1999 the tendency has reversed, economic growth rates exceed the world average, a share grows in the world economy. However, this growth is caused mainly by conjunctural external factors, a sound innovative base for an economic growth has not established yet that threatens with a fall of growth rates or a crisis fall if the operation of favorable external factors terminates. There are observed signs of the forthcoming economic downturn under conditions of forecast world economic crises of the beginning of 10s and especially of the beginning of the 20s of the 21<sup>st</sup> c. when a change of the prevailing technological order will occur. It should be taken into account that after the world crisis of 2001–2002, the fifth Kondratieff cycle has entered the downward stage which will likely finish with the world crisis if not similar to the crisis of the 30s then to the crisis of the beginning of the 70s. The Russian economy is organically built in the world one, and it can't remain beyond these crises.

The second component of the crisis situation covering an economic factor is in *worsening of the structure of economy*. The matter

in question first of all is a *reproductive structure*. While before 1990 the consumer sector oriented at satisfaction of people's demands and the innovative-investment sector (the nucleus defense-industrial complex) was oriented at the development and support of defense capacity of the country (they occupied together 65% in the structure of gross output) prevailed in Russia's economy, and the power-raw material sector and sector of infrastructure occupied the third and fourth places (18 and 14% respectively), then as a result of neoliberal market reforms and structural economic conversion the structure has radically changed: the leadership has passed to the sector of infrastructure (and first of all to trade) — 34% and power and raw material sector — 23%, and the sector of consumer and innovative-investment has lost many times in their weight, found out themselves at the edge of the crisis. As a result the country can't ensure either satisfaction of people's needs, or renewal of obsolete fixed capital for account of national production. These are obvious signs of a structural degradation moving Russia closer to the structure of economy of economically backward countries.

The shifts in the *economic (institutional) structure* may be evaluated more favorably. A decisive turn from the state-monopolized economy to mixed has been made, a viable petty order ensured the employment of million of workers and saturated the consumer market with comparatively cheap goods and services has been formed. Thus Russia has approached to other civilization by economic structure.

However, it could not but turn out without faults and strategic errors. A slogan of withdrawal of the state from economy was announced and untying a market element. A crazy gallop of prices resulted in an unfounded redistribution of resources in favor of monopolized industries due to agriculture, income and savings of population. Privatization transferred for nothing the most valuable wealth created by labor of many generations to hands of a small group of oligarchs, the primary accumulation assumed a parasitic nature. Neither state nor large-capitalist orders could ensure efficient functioning within a long period of time. The scales of natural-household order, especially in private agriculture and service sphere, expanded suddenly. The announced objective of market reforms was not attained: economy became less efficient, more wasteful. Only from 1999 the tendency began to turn for the better, but quite slow as the previous model of liberal-market transformations imposed by the International Monetary Fund continues.

Negative tendencies also prevail in the *structure of foreign economic ties*. The raw material orientation of export that had prevailed earlier intensified: in actual fact economy is supported by an oil doping, a share of fuel in the structure of Russian export reached 53% in 2003, while the mechanical engineering products, foodstuff, industrial commodities for population prevail in the structure of import. A considerable part of the Russian economy is under control of TNC, a foreign debt increased many times in the 90s; extended loans were spent inefficiently or were stolen; only in recent years the tendency towards reduction of the state foreign debt has prevailed (but a foreign debt of corporations and banks continues growing).

Under the structure of economy formed Russia occupies the position of a semi-dependent, exploited country — a source of natural raw material and market for sale of finished goods in a geoeconomic space. This position might aggravate even more after accedence to the WTO when the national market will be more open for import goods for other civilizations. It is not by accident the Ministry of Economic Development forecasts for an outlook up to 2015 the import growth rate 2.5 times higher than exports. This will finally result in a negative balance in foreign trade of goods. There is also a negative balance in the trade in service now: for instance, in the field of international tourism it reached USD 8.3 bln. in 2003.

The tendencies formed in the structure of economy are aggravated by *polarization of income of population*. While in the USSR the imbalance between income of various social groups (economic stratification) was a relatively minor and it was compensated partially by developed system of social consumption funds (it was borrowed by many developed countries, to the purpose), then as a result of market reforms the tendencies towards polarization of income prevailed: a small group of owners of capital and officials enriched by various ways income per capital increased 18–20 times the income of a lower group, a considerable part of population found itself below the poverty line and survived owing to intensive labor at personal husbandry, shuttler trader business, petty commerce etc

So-called «monetization of benefits» that has been implemented on the initiative of the government (the most part of such benefits are not benefits, but a partial compensation of losses suffered in the years of reformed, for unprotected groups of population) will finally aggravate the polarization of income and social instability in the country.

According to the «Forbes» magazine 100 richest owners of Russia have accumulated the capital of USD 140 bln. that exceeds twice the total level of investments in fixed capital countrywide in 2003. The scales of «capital flights» abroad are growing. Similar tendencies are observed only in Latin American, Moslem and African civilizations.

The tendencies referred to above have become the basis for lowering the estimation of an economic factor from 7.3–7.8 points in 1960 and 1970 to 5.9 points in 1990 and 3.5 points in 2000 that indicates a deep-seated crisis hit Russia's economy and a sharp worsening of its position on a geoeconomic space.

Based on the said above we can define the essence of the **fourth critical situation** that characterizes the position of Russia in a geoeconomic civilizational space of the 21<sup>st</sup> century.

*The persistence of tendencies prevailing now in economy, weakness of an innovative factor of economic growth and dependence on external conjuncture, degradation of reproduction and external economic structure, increasing control of TNC, the growth of polarization of income of population that has reached dangerous limits lead to turning Russia into a backward, dependent country in a geoeconomic space. These quite dangerous tendencies may be overcome only provided that a new economic strategy is worked out under the efficient role of the state.*

**5. State-political factor.** It is a common opinion that socialism has finally collapsed in competition and struggle against capitalism, that the state-political and economic system of capitalism has established itself forever in the world, and Russia has corrected a strategic error made some time ago by returning to the pale of capitalism and bourgeois democracy. However, these convictions are far from being true.

**Firstly**, the Stalin's model of socialism continued by his untalented heirs and imposed by force on the Eastern European countries has turned to be inviable. As for the model of socialism of the NEP period that was taken, developed and adapted to present day conditions in China, Viet Nam and partially in post-war Sweden and Germany, this model has proved convincingly its economic and social advantages there. The most demonstrative is an example of China that after a «Great Leap Forward» pursues the «market socialism» course and during a quarter of the century it maintains an average GDP growth rates of 9–10% and an increase of 5–6% in real income of

population, in 2–3 decades it has a chance to turn into the first power in the world in terms of the GDP volume.

**Secondly**, as **Pitirim Sorokin** has demonstrated convincingly, both capitalism and socialism will go away to the historic past, and they will be replaced by a fundamentally new, *integral system* that will synthesize positive features of capitalism and socialism, but will leave overboard their basic drawbacks: «If mankind avoids new world wars and could overcome the existing threatening critical position, then the prevailing type of evolving society and culture will likely be neither capitalistic, nor communistic, but *sui generis* type which we designate as an integral type... It should include many of positive values and be free of serious defects of each type. Moreover, the evolving integral system in its complete development will unlikely constitute a simple eclectic mixture of specific features of both the types, but a united system of integral cultural values, social institutes and integral type of person, essentially different of capitalistic and communistic patterns. If mankind fails to avoid new world wars and it can't ease a threat of critical situations today, then its future may become problematic and gloomy. This is my forecast of an alternative future of mankind in brief» [11, p. 115–116].

This forecast was published in 1964, but for the third part of the century elapsed, its validity becomes more and more obvious. Not only socialistic countries, but also capitalistic ones will have to undergo transformation into the post-industrial integral system. Therefore the establishment of spontaneous-market capitalism and «managed» bourgeois democracy is not a step forward to the post-industrial integral society of the 21<sup>st</sup> century, but a jump back to the spontaneous market capitalism of the 19<sup>th</sup> c. This is not a base innovation, but paradoxical, enormous anti-innovation that has been implemented by non-professionals and irresponsible politicians to please western coaches and from their dictation.

**Thirdly**, an attempt to copy accurately and extend to the Russian soil the system of values inherent to western civilizations, including in the state-political field has failed and could not succeed (the same way as a previous attempt to impose western-Marxist ideals on the Russian civilization). The world of local civilizations is diversified and many-sided, and certain universal principles laid as the foundation of the state-political values are subject to modification and differentiation in various civilizations in the context of their specific features, mentality and historic experience. The application of single patterns and standards that are widely practiced by western politi-

cians and ideologists, advocates of human rights (not taken into account the responsibility of man) can't bring anything but political conflicts.

The foregoing refers both to the role of the state in society and especially in economy. *It is incident to Marxism to overstate the role of the state* in the development of society while limiting the role of personality and collectives. Under the Stalin's apotheosis of the almighty totalitarian state (where the state machinery merged with the party one and subordinated to the latter), it turned into a quite dangerous tool of violence against society. The totalitarian state as a kind of despotism of an oriental type regardless of whatever motives are used as a cover of their actions, had no future. After the death of the Founding Father of the totalitarian state there were taken attempts to modernize it, humanize it, but unsuccessful. Therefore such type of state socialism collapsed both in the USSR and European socialist countries.

However, the matter was not limited to that. **Mao Zedong** has one striking comment: «In order to unbend, one has to overbend». And the brave reformers of the 90s really overbent. They put forward and tried to implement the concept of deetatization, «reducing the involvement of the state» in society and economy, they practically discontinued the mechanisms of state regulation of social-economic development and vindicate the ideas waived long ago about the state as a «night watchman» of an all-good «invisible hand of the market» etc. Admittedly, in doing so they did not forget to use the state power to implement «universal privatization», the robbery of the state and most population.

Reducing the role of the state in the regulation of economic and social development (under increase in the number, irresponsibility and corruptibility of the state machinery) became the key factors in exacerbating economic and political crises, a rapid growth of crime and bribery; it threatened by the disintegration of the state as a result of aggravating separatism.

From the end of the 90s, the situation began to change, the «vertical of power» strengthened, a threat of the decay of the Russian civilization no longer existed. But the same comment of Mao Zedong also worked out here. The authoritarian elements began to intensify in more and more centralized state machinery that under insufficient professionalism and inability to foresee the consequences of radical decisions may lead to unforeseen negative consequences.

As for the role of the USSR, Russia in a *geopolitical space* then after the victory in World War II, it considerably strengthened and possibly reached the maximum for all the history of this civilization (it could be compared only with a short period after the victory in the Napoleon War of 1812). The USSR headed the world system of socialism, became a permanent member of the UN Security Council, many developing countries followed it. The military-technological parity was reached with the western bloc that was confirmed during an indirect collision with the USA during the Vietnamese War. The USSR became the initiator of the international détente, prohibition and partial destruction of certain types of weapon of mass annihilation.

However, after the disintegration of the USSR and Comecon, a voluntary dissolution of the Warsaw Treaty, the position of Russia in a geopolitical arena worsened noticeably. Formally, Russia remained the successor to the USSR, but in actual fact they regarded it less and less. Strategic mistakes of the period were a blind following in the wake of the US foreign policy, discontinuing cooperation with many former partners. The CIS was failed to transform into a real union, after «color» revolutions in Georgia, Ukraine and Kirghizia, a growth of contradictions with Moldavia and approaching of the NATO and EC directly to the Russian frontiers, a prospect of remaining in isolation and transformation into the regional state from once powerful super power threatens more and more to Russia.

The geopolitical influence of Russia is supported until now by its armed forces, the availability of about half of the world's stock of nuclear weapons, a considerable volume of export of weapons that exceeded USD 5.6 bln. in 2004. However, this factor is transient. The delivery means of nuclear weapons become obsolete and are not renewed on a necessary scale. The defense-industrial complex, a single in the scale of the USSR, was broken after its disintegration, and then it was weakened to the utmost limit as a result of a many time reduction of public purchases of advanced weapons. The military-political influence of Russia is inconsiderable in the world as well as the participation in the UN peace operations. This component will unlikely improve considerably in prospect. As a result the estimation of the state-political factor, geopolitical position of Russia dropped from 8.1 in 1950 and 8.3 points in 1960, 7.9 in 1970 up to 5.8 in 1990 and 4.2 in 2000.

Thus, one could formulate the **fifth critical situation** that determined the position of Russia in a geopolitical space of the 21<sup>st</sup> century.

*The strategic errors that were made in social-political transformations led to the disintegration of the USSR and Comecon, restoration of spontaneous market capitalism with ousting of the state from economy, discontinuation of a defense-industrial potential, a serious worsening of geopolitical positions. If such tendencies persist, Russia will turn into one of many regional powers. As a counter to the said the strategy of further transformation of a social-political system in the direction of the formation of an integral society may lead to social-political stability, strengthening of democratic institutes under a strong state responsible to the civil society, enhancement of the role of the country in a geopolitical space and world order based on the principles of the civilizational multi-polarity.*

**6. Spiritual sphere.** The sphere of spiritual reproduction — science, education, culture, ethics, religion and ideology — plays an immeasurably important role in the formation and dynamics of local civilizations, the system of their values and self-identification. In this sphere the Russian civilization has uncontested advantages and occupies a worthy place in the system of local civilizations of the fifth generation. However, negative tendencies are also observed here and a critical situation of the 20<sup>th</sup> century is forming.

During the 20<sup>th</sup> c. — from its very beginning — Russia occupied one of the key places in the world *science*. The leading scientific schools formed here, a constellation of scientists of an international recognition starred here as **D.I. Mendeleev, V.I. Vernadsky, I.P. Pavlov, N.I. Vavilov, P.A. Sorokin, N.D. Kondratieff, A.L. Chizhevsky, A.A. Bogdanov, N.A. Berdyaev** and many others. They laid the cornerstones of the post-industrial scientific paradigm demanded in the 21<sup>st</sup> century. It is generally recognized a contribution of the Soviet scientists to the creation of the missile-nuclear shield, nuclear power industry, peaceful exploration of space and many other directions of fundamental science.

However, the leadership began to be lost already from the 70–80s, despite an ample funding, and in the 90s a hammer blow was made to the science, the blow of which it can't get over. The real funding of science was reduced 6–7 times, not only by the state, but to a great extent by industry. Many scientific and nearly all engineering schools are depleted to a great extent, and some of them nearly discontinued functioning at all as well as a sectoral science serving as a bridge for the assimilation of

the outputs of fundamental researches and inventions in production. The number of researches dropped, they considerably advanced in age, the influx of talented youth in science reduced many times. The maintenance of an artificial dissociation of academic and sectoral science from the higher school contributes to it. The forthcoming reorganization of science may intensify these tendencies.

The Russian system of *education* was considered the best in the world for a long time, and it became the basis of a scientific-innovative breakthrough in the post-war period. However, from the 50s of the 20<sup>th</sup> c. they began to experiment with such system. It was losing its creative, innovative spirit. This tendency is evidenced specifically by non-professionalism shown by scientific, state-political and business elite during transformations of the 90s, many strategic mistakes made during reforms, inability to foresee real consequences of such reforms. Governmental subsidies for education fell sharply, and its technological base is outdated in many ways. The primary vocational and secondary vocational technical education discontinued. The higher education (especially non-governmental) is growing at priority rates, but its quality worsens in many ways. The launched educational reform targeted at standardization and system of tests oriented at pragmatization in accordance with the US and Western European models, «throw-off» of a considerable part of educational institutions from the federal budget – all the said may have far-reaching negative consequences, a loss of an innovative direction of graduates, a weak ability to adapt to a rapidly changing world. The talks about the system of continuous education remain good wishes not followed by real deeds. The number of foreigners willing to get education in Russian higher institutions reduces. But with those who graduated from these institutions in due time and well-disposed to Russia no continuous work is maintained.

It is generally recognized the high level of the Russian *culture* and its noticeable contribution to the world culture. However, in recent decades this influence has begun to weaken, and even the masterpieces of the world level are not that many. The state has reduced considerably the support of national culture. At the same time, the reverse impact has intensified many times – the flow of culture and translated literature has flooded the TV screens, Internet sites, counters of the bookstores, and such patterns of anti-culture often advocate violence, moral permissiveness etc. A cross-civilizational cultur-

al exchange resembles more and more a one-way street, admittedly, not a few real people of art, talents not demanded in their own homeland are taking the reverse side.

*Ethic* foundations of the Russian civilization despite severe trials of the revolution and Civil War, Stalin's repression, have remained inviolable in many ways; a so-called «moral code of Communism builders» repeated partially these foundations. However, in the 90s they suffered great losses. A spirit of gain, unprecedented competitive struggle, devaluation of human life, a wave of contracted murders, crime in various forms and bribery began to spread intensively. Quite a lot law-enforcement officers, governmental servants included in this process. They start to propagate a sexual promiscuity, a number of children born out of wedlock and abandoned children began to grow. These are grave problems undermining the moral fundamentals of future generations.

*Religion* experiencing the Renaissance and seeking to revive the spiritual influence has tried to counteract such phenomena. A lot of former temples have been returned to the Church — Orthodox, Moslem, Buddhist, — a lot of new ones have been built; the state assists actively in this. Clerical additional education and upbringing evolves. This renders a positive influence on the maintenance of the system of civilizational values.

*Ideological work* was weakened. In the 20–30s ideology of revolutionary changes was attractive and mobilizing force for millions of Russia's nationals. A refusal from the party-state ideological machinery of the Soviet period was accompanied by an attempt to refuse from ideology at all that was a mistake. In this or that form ideology determines the system of life objectives and interaction between society and each man, serves as a cementing force for a local civilization, especially in crisis situations. The attempt to form a «national idea» artificially, that would unite the thoughts if not all, but many of Russia's nationals, has failed. Such idea is born not on the top, but at the bottom in the periods critical to the country and civilization. Time has come now for that.

In the post-war decades a socio-cultural factor was comparatively at a high level — 7–8 points. However, already by the year 1990 it fell up to 6.3 points as a result of market transformations, discontinuation of a governmental support to science and education, and dropped up to 4.7 points by the year 2000.

Thus, one could formulate the **sixth critical situation** in the dynamics of Russia and its relations with other civilizations.

*Possessing a spiritual potential generally recognized in the world, preconditions for a transition to an integral sociocultural system, in the recent decade and a half Russia has suffered considerably losses in this potential – in science, education, culture and moral foundations of the society. The continuation of these tendencies, a lack of sufficient support from the state threatens with a degradation of the sphere of spiritual reproduction and a loss of one of the leading places in a global sociocultural space by Russia. The society and the state should take urgent steps to revive the spiritual sphere – foundation of the Russian local civilization.*

**7. Integral estimation of Russia's dynamics and its place in a geocivilizational space.** The highest integral estimation was made in the period of 1950–1970 – from 6.7 to 7.5 points. The Eurasian civilization went through perhaps the highest rise for all its millennial history which embraced all six factors; the influence of Russia was most considerable in a geocivilizational space.

However, the country began to lose the positions that had been won before, already in the ensuing two decades in the 70s and 80s; an integral estimation declined up to 6.0 by 1990. While the natural resource endowment remained high, but a technological lagging from the vanguard countries increased (a lagging in the assimilation of the fifth technological order), economic growth rates dropped (they turned out to be lower than the world average), a social-political instability was building up. The signs of a civilizational crisis matured more and more clearly, however the ruling elite failed to diagnose them correctly and effect deep and timely transformations, limited to low efficient reforms. As a result of a refusal from a «Cold War» the geopolitical authority grew for a short period, but the leaders failed to use this by making large strategic mistakes.

As a result a deep-seated civilizational crisis broke out in the 90s, the fifth national catastrophe over the millennial period, and the integral estimation fell up to 4.4 points. The voluntary dissolution of the USSR and Comecon was the largest failure of this period, disintegration of the Eurasian civilization. Only a natural-ecological factor remained unchanged; where the largest contribution to the degradation of the country was made by technological, economic and state-political factors. The foundations of the civilizational genotype were undermined, the question on the disintegration of Russia was placed on the agenda.

After a new shattering blow of the crisis in 1998 the period of recovery, improvement of a number of factors began. It seemed as if Russia entered the revival phase. However, a technological lagging continued increasing, innovation were not given effect to. Any noticeable improvement of demographic, natural-ecological and socio-cultural factors was not observed, the state leaders failed to choose a long-term strategy of revival and mobilize people for the pursuance of such strategy.

Therefore the summary **integral critical situation** may be formulated as follows.

*In the 90s Russia experienced one of the deepest civilizational catastrophes for its millennial history, it is thrown back for decades by a number of factors, and it has lost its major part of geocivilizational influence. While in the first years of a new century there are observed the signs of revival caused by favorable external economic factors, internal factors of innovative renewal of society have not brought into action. Russia's future in the 21<sup>st</sup> century depends on the working out and implementation of a long-term strategy for the solution of the cluster of critical situations.*

We've reviewed the cluster of critical situations, the development of which will determine the future of Russia and its place in a geocivilizational space of the 21<sup>st</sup> century. Let's dwell on now on the possible ways to solve each of the situations, and then provide a summary quantitative estimation of the scenarios of Russia's civilizational development up to the middle of the 21<sup>st</sup> century.

### **16.3. Forecast for Solution of the Cluster of Critical Situations in the 21<sup>st</sup> Century**

Based on the cluster of the identified critical situations in the dynamics of Russia and its place in a geocivilizational space of the beginning of the 21<sup>st</sup> century there have been explored the outlooks for the development of the situations and possible ways to solve them up to the middle of the 21<sup>st</sup> century. Two scenarios of further development have been taken as a basis: inertia-based under the persistence and continuation with these or those modifications of the tendencies formed at the end of the 20<sup>th</sup> — beginning of the 21<sup>st</sup> c. (a pessimistic scenario that may finish with a complete or partial

disintegration of Russia, under a final persistence of disintegration, passing of the Eurasian civilization into the history); the scenario of an innovative breakthrough transforming all sides of society's life and ensuring a satisfactory solution of major critical situations, revival and enhancement of Russia's role in a geocivilizational space, and in the long view in limited (mainly Slavic) outlines and the Eurasian civilization.

We'll continue to make a forecast of the development of crisis situation within the same list of factors and sequence as it has already been done in the previous sub-section when the cluster of critical situation was identified.

**1. A forecast of the demographic situation** is most completely supported with the source data. The UN forecast that has been worked out up to 2050 (versions of 1998 and 2002) may be used to this end in three variants — upper, average and lower (*table 16.3*); version 2002 provides for the decline in population of Russia according to the average forecast variant by 20 mln. persons by 2020 (101.5 mln. persons instead of 121.5 mln.). This forecast of 2002 of all others may be taken as inertia-based (pessimistic), although some demographers forecast even a gloomier picture. Let's take the upper variant of the forecast in the version of 2002 as an optimistic scenario.

*The pessimistic scenario will mean:*

➡ a decline of the population of the country to 2050 by 33.8 mln. persons to 2000 — 23%;

➡ an increase in the annual average rate of the decline of population from 0.22 to 0.59%, first of all owing to the increase in the mortality from 14.3 per 1 000 persons up to 16.8;

➡ the growth of a mean age of the population from 36.4 to 43.5 years — by 20%, the increase in a share of population at the age of 60 and above from 18.3 to 31.1 years — by 70%, i.e. a considerable aging of population, a growth of conservatism.

The national-confessional structure of the population will change as a result of the priority growth of Moslem population, especially in the republics of the northern Caucasus: a natural increase in the population makes 1.96% in the Chechen Republic, Ingushetia — 0.1%, Dagestan — 0.96%, and in many regions where the Russian nationality prevails there are observed high rates of the natural decline of population (for instance, in the Pskov Region — 1.6, annual decline, in Tver and Tula Regions — 1.4%). Under the assumption that in prospect the Slavic population will decline due to a natural loss by

1% a year, and Moslem will be growing with the same speed, then by 2050 the number of the Slavic population will decline nearly by 40% making 70 mln. persons, and by the end of the 21<sup>st</sup> c. 42 mln. people in a total.

One should add the factor of migration to it. Nature does not like vacancy; the same statement is valid with respect to society. A releasing territory (especially in Far East and Siberia) will be occupied by migrants from other civilizations — first of all from Chinese (Far East) and Moslem (the regions of European Russia and Siberia). The actual process of occupation of a demographic niche by legal and illegal immigrants is already under way at priority rates. The territory where the Russian population prevails will be shrinking like a shagreen leather.

It should also be taken into account the factor of alcohol addiction. Many a part of the Slavic population takes to drinking, lapses, and dies of alcohol addiction. A growing plague of drug addiction completes it as well as an accelerating spread of AIDS. Religion prohibits taking alcohol to Moslems; there are less drug addicts here, stricter imperatives of nonmarital relationship and a threat of catching the AIDS is less.

The present-day migration flows influence negatively both the educational level and the innovative activity of the population. The immigrants filling in the niches as a rule a lower by their educational level as compared with the native population, they are mainly engaged in trade, construction, housing and utilities business, they are little fit for mastering base innovations. At the same time a considerable part of talented highly qualified youth, scientists and specialists emigrate to the West, becoming there a cheap moving force of a scientific and innovative advance.

All these demographic tendencies of the pessimistic scenario will finally result in Russia becoming a quite different civilization by the middle of the 21<sup>st</sup> c. — where the population of other civilizations prevails, with a comparatively low educational level, with a loss of a considerable part of a scientific-innovative potential and traditional Russian culture. This may lead to shrinkage of the territory, the decay of the Russian civilization; the regions where representatives of other civilizations begin to prevail, according to the laws of democracy, will begin to pass first *de facto* and then *de jure* to the spheres of other civilizations, first of all to Chinese and Moslem. The Russian population that will survive in these enclaves will be in the position of dying out and not numerous peoples of the North.

Under a pessimistic scenario of the demographic dynamics the points of this factor will fall from 3.6 in 2000 to 1.7 in 2050 that will mean a transition of the Russian civilization to a relict phase. This will already be other people, another country and a relict civilization.

However, such tragic final is not inevitable at all for the civilization with the many millennial prehistory and history. An *optimistic scenario* has not less chances to be implemented in the historic outlook — a gradual decrease of the depopulation rates and by the end of the forecast period — a transition to a natural growth. Several arguments may be given in favor of such scenario.

**Firstly**, *it is the operation of the general population law*. In the periods of a considerable decline in the number threatening to the persistence of these or those biological species, they meet the threat of extinction with a sharp increase in the birthrate. Something similar was observed in Chechnya at the end of the 20<sup>th</sup> c.: in a critical situation, conditions of war and growth of mortality the population census conducted in 2003 found out the level of a natural increase in population of 1.8–2.0% a year unpredictable for Russia. But it is necessary to this end that families, and first of all young, would feel a demographic threat and meet it adequately by an increase in the birthrate and that the state would render a substantive support to families rising children.

**Secondly**, *the present fall in the birthrate and growth of mortality that have generated the depopulation are determined mainly by social-economic reasons*: a drop of 2.5 times of the real size of salary and retirement benefits during the years of neoliberal reforms as well as nullification of savings of the population as a result of galloping skyrocketing inflation, weakening of social support from the state, a loss of confidence in own future and future of children, an extreme increase of family expenses for the maintenance, education and health care of their children. However, these factors are transient. If crisis and its effect are handled, high income growth rates of population ensured and their polarization decreased, upward tendencies may prevail in the demographic dynamics.

**Thirdly**, *demographic processes have a strong dependence on social policy of the state*; family and society share the costs of expanded reproduction of manpower, human capital between each other. The viability and diffusion of ideas of socialism was in taking a major portion of care about health, education, culture of population, especially the oncoming generation by the state. However, the

Table 16.3

**Forecast of Dynamics and Structure of Population in Russia \***

		2000	2010	2020	2030	2040	2050	2050 to 2000, in %
<b>Population,</b> mln. persons:								
forecast for 1998	b	146.9	144.4	140.6	135.2	128.9	121.3	83
forecast for 2004	a	146.6	141.4	138.7	134.8	133.9	134.5	92
	b	146.6	140.0	133.1	125.3	118.3	111.8	76
	B	146.6	138.6	127.5	116.0	104.3	92.4	63
<b>Annual average growth rates, %<sup>2</sup></b>								
forecast for 1998	b	-0.1	-0.16	-0.33	-0.40	-0.49	-0.61	
forecast for 2004	a	-0.22	-0.25	-0.21	-0.27	0.00	0.04	
	b	-0.22	-0.45	-0.45	-0.61	-0.56	-0.59	
	B	-0.22	-0.65	-0.89	-0.97	-1.09	-1.26	
<b>Average population age, years</b>								
forecast for 1998	b	36.7	38.4	40.7	44.1	46.3	46.1	126
forecast for 2004	a	36.4	37.6	38.8	41.7	38.7	37.3	102
	b	36.4	37.9	40.0	43.4	44.9	43.5	120
	B	36.4	38.3	41.4	49.6	49.8	50.9	140
<b>A share of population at the age of 60 and above</b>								
forecast for 1998	b	18.5	18.2	22.9	25.8	28.6	33.4	181
forecast for 2004	a	18.3	17.7	21.5	23.2	23.9	25.8	141
	b	18.3	17.8	22.4	24.9	27.0	31.1	170
	c	18.3	18.0	23.4	27.0	30.7	37.6	205
<b>Net migration. per 1000 persons of population<sup>2</sup></b>								
forecast for 1998	b	2.7	1.4	0.7	0.4	0.4	0.4	15
forecast for 2004	b	2.4	0.4	0.4	0.4	0.4	0.4	117
<b>Anticipated average life span, years</b>								
forecast for 1998	b	66.6	68.7	71.5	73.7	75.0	76.7	115
forecast for 2004	b	66.0	65.0	66.9	69.2	71.0	72.9	110

\* [272, p. 372–373]

<sup>1</sup> *a* – upper variant, *b* – average, *c* – lower<sup>2</sup> annual average for the previous five years

generation of political leaders of the 90s infected with the ideas of «market fundamentalism» tried to discharge the state of this function. Proclaiming the Russian Federation a social state according to the constitution, the ruling elite in effect pursued an anti-social real policy that became the main reason of depopulation. A failure of a social reform that was called by mistake a «monetization of benefits» has demonstrated that such policy lacks prospects. One should hope that the generation of political leaders of the 20s (whose time for a decision-making will come approximately in 2010) may work out and implement a demographic, migration and social policy that will permit to reduce and then overcome the tendency towards depopulation with time.

Under a pessimistic scenario a negative tendency will persist by 2010 (an integral point will decrease from 3.6 to 3.3 by a demographic factor), and by 2020 it will stabilize at the level of 3.3, and from 2030 a slow growth will begin with an increase up to 4.0 by 2050. However, according to a very pessimistic scenario the estimation of a demographic factor will turn out to be two times lower than in 1960 — the force of inertia is too strong in this sphere and a damage caused to population by neoliberal and political reforms of the 90s is exorbitant.

**Fourthly**, for preventing the retirement and melting of the title Russian nation for the Russian civilization it is necessary to pursue a differentiated, selective and deep demographic and migration policy. The increased subsidies for a birth and upbringing of children should be first of all granted in the regions where the highest depopulation rates are observed. The regulation of migration should have as its objective the reduction of the outflow of talented youth (scientists, programmers, engineers and men of arts) and the encouragement of the inflow of qualified manpower, first of all owing to the Russian speaking population of the republics of the ex USSR. It is necessary to reduce illegal immigration and first of all render support to those immigrants who are necessary for the development of production of goods and services, assimilation and diffusion of innovative products. It should be chosen a mechanism of re-immigration of scientists and specialists: with their returning back to the motherland they will bring new technologies, entrepreneurial spirit, contacts with foreign capital.

**2. Natural-ecological factor** is in a crisis state in a lesser degree than demographic. Due to natural wealth granted by nature, identified and maintained by labor of the tens of previous generations and

an ample (although not the best by climate conditions) territory: the density of population is 5 times lower than the world average here, and it will be 9 times lower by 2050. Therefore in Russia the endowment with natural resources is considerably better as compared with other civilizations; however the level of environmental pollution is considerably higher per capita due to the backward technologies and low temperatures. The original estimation of a natural-ecological factor by 2000 remained comparatively high — 7 points to 3–4.5 points by other factors.

However, the difference from other factors the situation with a natural-ecological factor will worsen in prospect under both scenarios: under optimistic — up to 4.5 in 2050, under pessimistic — up to 3 points. What circumstances have brought it about?

**Firstly**, *the main source of Russia's natural and economic wealth* that brings a natural rent to the entrepreneurial sector and state budget on a large scale — *mineral resources* (and first of all oil, natural gas, agroores, ores of ferrous and some non-ferrous metals) — are *non-renewable*, fast to deplete and not replenish through geologic exploration in quantity and quality. With the development of demand on the national market the export opportunities of minerals reduce and the role of Russia as a donor of neighboring civilizations (first of all, Western European, Eastern European, Japanese, Chinese and Latin American in prospect) will be falling. This tendency will intensify if a breakthrough is made in the hydrogen energy and high-tech civilizations will be leading on the world power market (North American, Western European and Japanese). Concurrently, a deforestation of the best-located forests continues, the areas of arable lands reduce and their fertility falls, a shortage of sweet water increases in the densely populated areas. Therefore the myths about limitless natural resources of the country will be shattered, their increasing shortage and rise in price is becoming more and more obvious.

A difference between pessimistic and optimistic scenarios is only in the intensity of these processes. If the tendencies that have formed now persist, a heavy deficit of natural resources will be felt already in 2–3 decades. Under the optimistic scenario if the state takes steps for the priority increase in the explored reserves of natural resources, reduction of a predatory use of natural resources, if as a result of a technological breakthrough implemented a replacement of fossil fuel with renewable power is implemented, natural raw material and materials with composites, nanomaterials etc — natural resource

famine may be delayed by one generation, and the acuteness of an ecological crisis will be eased.

**Secondly**, *the growth of population's demands* (although declining in its number) and the waste from its life activities, increase in production while a technological backwardness persists, *will lead inevitably to the growth of environmental pollution* with hazardous emissions that will become one of the factors lowering the quality of life of the population. An active and strong environmental policy may counteract this, a wide support of resource saving, environmentally friendly technologies, especially in transport, stationary power, metallurgical, cement and other plants. A wide employment of geobiotechnology and ecobiotechnology permitting to extract beneficial components, carry out efficient, complex processing of resource and waste, liquidate oil spills and other pollutions, may contribute to it.

It should be taken into account that a favorable niche for the employment of the Kyoto Protocol mechanisms – a reduction of greenhouse gas emission to the level of 1990 – was conditioned by a crisis fall of production; this niche is fast to fill in under the conditions of production growth. In the nearest 4–6 years the level of emissions of 1990 will be exceeded, the country has to bear additional costs. It could be countered only using a large-scale employment of ecological innovations under a substantive support of the state.

**Thirdly**, during the last year and a half *the level of wear of fixed assets* in industry, agriculture, transport, housing and utilities *exceeded the critical point*. The renewal coefficient of fixed assets dropped from 8.2 in 1980 to 1.1% in 1998 and while it somewhat increased (up to 1.9%) in 2003, however it remains extremely low [8, p. 322] that leads to the increase of technogenic and environmental catastrophe which under a pessimistic scenario will assume a snowballing nature with threatening consequences not only for Russia, but for neighboring civilizations (a sad experience of the Chernobyl catastrophe corroborates the reality of such threat).

One should further the prevention of a threat of catastrophe using two directions: accelerated replacement of obsolete and environmentally hazardous equipment and technologies with fundamentally new environmentally friendly one, increasing the environmental orientation of investments, including also large budgetary contributions to these services (including from a part of accumulated world oil and gas rent); introduction of tough economic sanctions against hazardous emissions, damage caused to the environment based on the size of necessary funds for overcoming of dam-

ages caused adjusted for the time factor (discounting) so that completely (and with some exceeding) to dispose of environmental antirent (super profit generated through a failure to meet the rules of efficient nature management and environmental standards) and induce the entrepreneurs to reduce hazardous emissions and prevent accidents.

**Fourthly**, the implementation of an optimistic or pessimistic ecological scenario depends largely on the policy of the state which is responsible to present and future generations for providing natural conditions for reproduction and life of people; this is the point of the strategy of sustainable development. The question is what environmental policy the state will pursue. If a real environmental policy as contrasted with nominally proclaimed continue in the wake of monopolies giving for nothing to use without control and irresponsibly, often predatory the richest mineral deposits, forestlands, fertile lands, if costs for reproduction of natural resources are not compensated for (geologic exploration, forestry, water management, forestry, melioration of lands), if the payments for damages caused to the environment are reduced to minimum, then a pessimistic scenario will become a reality, the point estimation of this factor will lower from 7.2 in 2000 to 3.1 in 2050, an ecological crisis in various aspects is inevitable.

And if the state breaks away from control of monopolies and TNC and begins to pursue an active and strong environmental policy reflecting the interests of present and future generations of many people living in Russia, creates an efficient mechanism of reproduction of natural resources and conservation of environment, undertakes monitoring for its state and fixes penal rates of payments for damages caused to the environment directing the generated funds for funding environmental measures (by restoring national and regional ecological funds), an optimistic scenario will be implemented, the estimation of a natural-ecological factor will make 5.8 points by 2050.

**3. Technological factor** plays a key role in a geocivilizational space as it lies in the foundation of economic and ecological dynamics, and it focuses the outputs of the development of science and education. This is where the largest gap between the inertia-based and innovative-breakthrough scenarios of 5.2 times is reached in 2050.

*The inertia-based scenario* proceeds from the assumption that the tendencies towards a further technological degradation, a refusal of the state and monopolies (all the more so TNC bossing

in many sectors of the Russian economy), ensuring the competitiveness of national products on external and national market formed in the 90s will persist. ***What is the effect if such scenario is implemented?***

**Firstly**, *in the near decade a scientific-technological and innovative potential of the country will be reduced to minimum, and finally broken.* Many scientific schools which used to be among the world's leaders in the field of natural and engineering sciences will become old and pass into nothingness. The liquidation process of the sectoral science served as a bridge between the fundamental science and production and engineering schools of the world level, ensuring the implementation of innovations and competitiveness of products assumed an irreversible nature (this process developed more rapidly and irreversibly in the defense-industrial complex). The support of innovations with talented engineers and highly skilled workers will sharply reduce. For many decades, the country will lose the human resources basis for the implementation of an innovative breakthrough, scientific-technological overturn — just in the period when such overturn opening the way to the post-industrial technological mode of production, its initial stage — sixth technological order is under way in the vanguard civilizations.

**Secondly**, *the tendency towards a fall in the competitiveness of domestic goods and not only on external market, but national intensifies.* The vacated market niches are occupied with import products and technologies, and the Russian products will be inferior both in the engineering level and quality and the level of costs (despite a very cheap manpower that becomes less and less fit for an innovative breakthrough). The accedence of Russia to the WTO facilitating the access of import goods and services to the Russian market will contribute to it. The Western European, North American Japanese civilizations which are in the vanguard of the technological breakthrough and TNC representing their interests will mostly occupy Russia's market niches.

**Thirdly**, *the state-rentier is sawing off the bough on which it is sitting by centralizing a considerable part of natural, technological and financial quasi rent, spending them on the maintenance of expanded official machinery, support of monopolies, force structures and not contributing the resources to future, to the assimilation of base innovations.* Together with a loss of competitiveness of national products and a refusal from the support of national manufacturers the state loses the base for imposing taxes and customs duties, it

turns out in a dangerous dependence on the fluctuations of the conditions on the world markets, a «goodwill» of monopolies and TNC. Such state having not worked out and not pursued a long-range strategy of an innovative breakthrough is doomed, as it does not meet national and civilizational interests. It will become a bankrupt sooner or later and be replaced by other more active and responsible state — or like a faint ample space the country will be divided between other civilizations.

However, one should see the opportunity and necessity for another ***optimistic scenario*** oriented at the innovative breakthrough that will permit, provided that such strategy is adopted in the near time, to improve the estimation of a technological factor from 3.1 in 2000 to 4.3 by 2020, 5.0 in 2030 and 6.8 in 2050. Then Russia will be able to master the sixth technological order, although it will be hard to enter the number of the world technological leaders — the losses of the technological degradation of the 90<sup>ies</sup> are too heavy.

***What are the preconditions and conditions for the implementation of an innovative breakthrough scenario?***

***Firstly, the strategy of an innovative breakthrough, a transition to the innovative way of development should be in the focus of attention of both the state and entrepreneurs, scientists, political and public figures, mass media, of all the civil society, become a national idea in a way, the main leverage of survival and revival of the Russian civilization. As the generation of the 90s the world outlook, way of thinking of which was mainly formed under the influence of ideas of neoliberal reforms, market fundamentalism, is hardly able to such radical turn, there is no choice other than to anchor our hopes on the generation of the 20s which will be taking decisions after 2010, critically revising a heavy legacy of the previous generation. A duty of scientists and pedagogues is to prepare the oncoming generation who is being educated now, for the implementation of the historic mission vested with it. If it fails to cope with this mission, a pessimistic scenario of technological and civilizational future for Russia will turn to be inevitable.***

***Secondly, the strategy of an innovative breakthrough should get a concrete embodiment in the choice of the system of priorities ensuring the competitiveness of domestic products on external and local markets based on the criteria of the technological level (the diffusion of the fifth and pioneer assimilation of individual directions of the sixth technological orders), assimilation of the promising innovative-market niches. The final result is an overturn in the***

trajectory of technological dynamics and close approach to the vanguard countries.

**Thirdly**, *the implementation of strategic priorities, national programs should get a new support with resources*, substantive and real state support. The matter in question is first of all about a substantive increase in the volume of investments (both private and state) and their innovative contents; substantive tax and customs preferences to businesses implementing innovative projects; directing a major part of investments, a part of world oil and gas rent accumulated by the state (Government and the Central Bank) to an innovative replacement of fixed capital and products. The innovative partnership between the state, science, business and civil society may be formed on this basis.

**Fourthly**, *under the conditions of globalization rapidly evolving it is impossible to ensure an innovative breakthrough being oriented only at own forces and internal market*. It is necessary to incorporate itself into the rhythm of global dynamics which is determined by the vanguard civilizations, unite the innovative potential of the CIS countries, establish own TNC by a breakthrough directions, actively act on the world high-tech markets, render state support to domestic producers implementing innovative projects.

**Fifthly**, *the success of an innovative breakthrough scenario depends in a deciding degree on the human resources* — scientists, inventors, designers, engineers, managers, civil servants and qualified workers. An innovative spirit should pervade all the system of education; at the same time, one should train specialists for commercialization of technologies, management of innovations, realize a well-directed specialized training and professional development of the team of workers for the implementation of each innovative programs, each major innovative project, and also civil servants.

A lagging with a choice of the innovative breakthrough-based scenario may detrimentally tell on other spheres, first of all of economic and ecological, and also state-political.

**4. Economic factor** for settlement of critical situations shows not less differences in optimistic (innovative) and pessimistic (inertia-based) scenarios than technological: by 2050 — 6.7 and 1.5 point accordingly — a gap of 4.5 times. How could such considerable «discrepancies» of forecast trajectories of economic dynamics be explained?

**Firstly**, *the economic growth rate (GDP growth), level of economic development (GDP per capita), efficiency of production and*

labor capacity (GDP per one employed in economy) *depends critically on the competitiveness of products manufactured in the country*, its sales volumes on national and international markets. If the tendencies prevailing now towards aging of fixed assets and products, especially under conditions of the accedence to WTO, persist, then it is inevitable a further ousting of domestic goods and services from internal markets (especially food, products of machine-building industry, and consumer goods industry) and the world market, a fall of sales growth and GDP rates, especially under conditions of periodical economic crises shocking all globalized economy and it tells most on its weak links. The stabilization fund that has been accumulated by the Government could unlikely delay the fall of production in a critical situation.

The forecast up to 2025 made by the RAS Institute of Economy warns about the opportunity of development of critical situations in economy: according to the pessimistic scenario, annual average GDP growth rates for 2004–2010 substantially decrease [186, p. 180]. The report authors believe that in the period before 2010 «an economic crisis in the basis of which is the retirement of fixed capital is possible in the country. This crisis will first of all hit the sectors of industrial infrastructure, agriculture and manufacturing industries and to a less extent — export-oriented industries. Consequently, the raw material and energy orientation of economy will intensify even more; the dependence of the country on foreign economic factors will increase» [ibid, p. 175].

It is possible to avoid this and to ensure a high annual average GDP growth rate, according to the report authors, only under an annual average increase in investments of 12–15% if the state finances about a half of the increase in investments [ibid, p. 177]. No such tendency is observed until now, and the line towards the redoubling of GDP will become a pipedream under such policy, and the Russian market will be flooded with goods and services of the Western European, Eastern European, Chinese, Japanese and North American civilizations both directly and indirectly through construction of own enterprises in the country using cheap manpower, local natural resources and underloaded infrastructure.

**Secondly**, *the rates of Russia's economic dynamics and its place in a geoeconomic space are determined by shifts in the infrastructure of economy*, distribution of capital and manpower by reproduction sectors and branches. It has been noted above the deformation of the reproduction structure that occurred for the years of neoliberal

reforms. *Table 16.4* gives the data on the shifts in the sectoral structure based on the system of national accounts.

Housing and utilities, agriculture have lost most in the weight; trade and finance and credit services of economy have taken on (3.8 times), administration and defense (by 85%). One should not forget that it has occurred against the background of a general fall of GDP output (nearly double by 1998) and an uneven growth of prices, large-scale redistribution of actual value created through prices in favor of the sectors representing the sphere of distribution which freeloaded for account of the sphere of production and real income of population.

The persistence, and the more so the deepening of these structural disproportions and deformations will aggravate even more the non-competitiveness of the Russian economy, its inability to respond to the challenges of the 21<sup>st</sup> century. ***Only based on the long-range structural policy actively pursued and supported by the state*** such formed tendencies could be reversed and a real turn to the optimistic, innovative scenario could be reached. This policy should include:

➡ the course for the priority development and innovative renewal of the sectors engaged in saturation of the consumer market and reproduction of human capital (agroindustrial complex, consumer goods industry, services, housing and utilities, consumer and social services, science, machine-building industry);

➡ restriction of the growth rates of the sectors making the sphere of distribution (especially swollen, with many intermediaries and high transactional costs of trade);

➡ a gradual overcoming of disproportions that have formed in prices and first of all in the counteraction of overstated prices by monopolies.

**Thirdly**, *the key direction in the regulation of economic dynamics and structural shifts is a radical improvement of institutional transformations, functioning of mixed economy, overcoming of critical situations that have formed here for the years of reforms.* If the inertia-based scenario is implemented, a low efficiency of mixed economy, parasitic nature of monopolistically capitalistic order persist (merging with the state machinery, it transforms into the state-monopolistic capitalism of a rentier type); a suppressed small commodity order that is still minor in terms of its specific weight – small businesses, farmers, individual manufactures; a low efficiency of the governmental sector being gradually privatized; an unreasonably high specific

weight of the natural-patriarchal order in the agriculture and consumer services that has helped to survive the families under conditions of a sharp fall of real income, but it is based on the super intensive labor and a relict technological base. The persistence of such institutional structure is a brake on the way of an economic growth and restructuring of economy.

It is time for the state to refuse from the illimitable aspirations for privatization giving out national, state resources and income from them to the hands of monopolists (including by means of a flat scale of taxes). One should clearly define the rational sphere of efficient activity of each economic order based not only on the short-term gain and income from privatization of the omnivorous budget, but also the nationwide interests and demands of future generations (this refers first of all to the social sphere, field of spiritual reproduction where the course for the illimitable privatization and «throwing-off» the costs from the federal budget in the field of science, culture and education may cause an irreparable damage to the future of Russia.

At the same time, it is necessary real measures for support and innovative renewal of small commodity and natural-patriarchal orders (households of the population) that play a decisive role in the maintenance of the employment and satisfaction of the family needs.

**Fourthly**, *the persistence of the current tendency towards polarization of income, deepening of economic stratification of the population is fraught with a further downing in motivation to labor by social upheavals* that will cause a gross damage to the economy (a recent experiment with «monetization of benefits» has confirmed such danger). A suddenly arisen (although the pre-conditions for that were created even in the period of stagnation and reconstruction) stratum of large property owners (that has united home-brewed oligarchs, compradores, top officials and leaders of Mafia structures) has appropriated a major part of social wealth using privatization and inflation. At the same time farmers, workers, engineering and artistic intellectuals, pensioners have turned out to be at the other pole — poverty and impoverishment. A middle class being formed between these two poles has turned to be inconsiderable and unstable.

The social structure formed is typical of semi-colonial, dependant countries, TNC and compradores play an increasingly large role in it, including from the top officials. It forms a social base for an inertia-based scenario which is detrimental to Russia's economy.

It is necessary a new social-economic policy which is able to reverse the polarization tendency and ensure a real social partnership among all strata and classes of society so that to solve the nationwide task – to save and revive Russia. All social strata constitute the elements of a single structure of society, they are all in one well-worn boat in the raging sea, and if such boat flips over, then everybody will suffer. It is here the toxicide against inevitable social explosions and cataclysms if the tendencies formed persist, as soon as the external conditions which are favorable now for Russia worsen. The way-out is that the strategy of an innovative breakthrough becomes general for all social strata and be implemented under conditions of bridging polarization, evolvment of a nationwide social partnership under an active role of a responsible state.

**5. State-political factor.** In the 90s, the country suffered one of the largest civilizational catastrophes in its history – a disintegration of the Eurasian civilization and the USSR, a change of a social-political system and state-legal order, the reign of crime, anarchy and separatism, an extreme weakening of the state and its armed forces.

From the end of the 90s the situation began to alter for the better, but dangerous tendencies have persisted: the inefficiency, irresponsibility and non-professionalism of the officialdom which have increased many times (the number of engaged in the management of annual average officers grew from 1.2 mln. in 1985 and 1.6 mln. in 1990 to 2.9 mln. in 2000 and 3.1 mln. in 2003 while the quality of management lowered), corruption and merging with the Mafia structures and TNC. Therefore, the strengthening of the «vertical of power» as such, while contributed to overcoming separatism as well as the administrative reform that was implemented in a hurry, adoption of many laws (often of low quality) has failed to remove the danger of inefficiency of the state-legal sphere, possible social-political upheavals. The alienation of the state from society will grow.

The persistence of these tendencies – under summing up of unfavorable scenarios of demographic, ecological, technological, economic development and reverse influence of the state-political dislocations and upheavals – will lead to the fall in the overall estimation of the state-political factor from 4.0 in 2000 to 1.8 in 2050 entailing a disintegration of the Russian civilization into several states (that meets the wishes of **Zbigniew Brzezinski** expressed openly) and a division into the spheres of influence of other, stronger civilizations (Far East and a part of Siberia – Chinese, North Caucasus – Moslem). It is not necessary to bring in troops to this end and such

Table 16.4

**Shifts in the Sectoral Structure of Russia's Economy (in current prices)**

Branches of Economics	Gross added value in % to GDP		2003 in %
	1990	2003	to 1996
Industry	35.4	24.3	69
Agriculture	15.4	4.6	30
Science and science services	2.6	1.1	42
Housing and utilities	3.0	3.9	130
Social services	7.6	6.0	79
Trade and public catering	5.2	20.0	385
Finance, credit, insurance	0.8	3.0	375
Administration and defense	2.6	4.8	185

troublesome (as experience with Iraq demonstrates) regime of occupation; it is enough to establish the puppet regime in this or that formally independent state, chaired by loyal people and bringing economy and infrastructure under its control.

Such danger of a challenge of the beginning of the 21<sup>st</sup> century realized by the generation of the 20s (and also the healthy forces of the previous generations, loyal to the civilizational genotype) will give rise to the natural reaction, a response to a challenge, consolidation of forces counteracting the disintegration, such bringing under control of other civilizations. It is just important that such awareness should come not too late and such force should rally based on such civilizational idea leaving aside their unavoidable differences and contradictions. In such case, the implementation of a positive scenario under which the role of the state-political factor intensifies with an increase of the estimation up to 6.8 in 2050. However, a return to the post-war estimation of 8 is already impossible as the social-political foundations and a geopolitical influence of Russia have been undermined too strong for two decades elapsed. Therefore the dreams about a return and a bipolar world with the two poles – USA and Russia – will just remain a beautiful dream, an air-castle. The arrow of time, as **Iliya Prigozhin** reasonably noted, has no back run. The future of the world developing is multipolar. It is essential that Russia should become one of the poles.

Let's examine the long-term transformations of the elements making the state-political system at large in two scenarios.

What are *the scenarios of the social-political system development* in Russia which interests will express and advocate the state?

The system that was formed in the 90ies could be described as the *state-monopolistic compradore-parasitic capitalism* (maybe its variant — state-oligarchic system) under which the monopolists and oligarchs newly come into being (supported by western states) and TNC taking over a growing share of economy are merging with the state machinery (to the extent of a personal union), use it impudently in own interests for account of the state and most of the population, jockey for position. A parasitic original accumulation of capital in such enormous unprecedented scales could not be made using other ways.

In the first years of the 21<sup>st</sup> c. a direct and unconcealed use of the state by oligarchs was restricted, and some of them fell under the car of Themis. However, the essence of the system has not changed at that; legal and other measures pursued by the state (privatization, egalitarian taxation, monetization etc) do not still reflect the interests of population.

In the long term, this tendency may persist under the inertia-based scenario and establish itself under a change of characters on the state-political arena as a result of next election campaigns. However, such system will unlikely turn to be durable, a critical situation will form sooner or later, and it will occur a political explosion of this or that depth and destruction that will negatively effect all other factors of a civilizational progress.

Another, *optimistic scenario* consists of in a timely democratic transformation of the state-political system with the coming of a new generation of the leading politicians and officials who will accommodate the diversity of interests of all strata of population more fully and harmonize these interests on the basis of a social-political partnership; it will require a higher level of professionalism of civil servants and political leaders, their ability to foresee short- and long-term results of decisions being taken. It is likely that the evolution scenario of a social-political system will take the way which has been predicted by **Pitirim Sorokin**, in future — formation of neither capitalistic, and nor communist, but an integral order with the democratic institutes and mechanisms inherent to it.

As concerns the *federative structure* and the extent of centralization of power, then contradictory tendencies are also observed here: departing from a unitary, but increasingly weaker state as a result of

political transformations of the beginning of the 90s a centrifugal tendency intensified, expansion of the independence of republics and regions, movement to a confederation under a weak center which is busy with the redistribution of property that was fraught with the disintegration of the state. From the end of the 90s the opposite tendency – centralization of power, concentration of decision taken and resources in the federal center – prevailed. While formally the federative structure was not cancelled by anybody, however in actual fact the tendency towards the unitary, centralized state could be more and more clearly traced. It is unlikely that such tendency will prevail. It could be anticipated that in prospect of a few decades it will be reached an optimal distribution of functions and resources between federal, regional and municipal levels of power that will accommodate the diversity of social-political and national-cultural conditions in the vast, inhomogeneous country that will ensure a social-political stability and conditions for revival of the Russian civilization.

*A geopolitical influence* of the country reached its maximum in the post-war period (the estimation of about 9 points in 1950 and 1960), however it was declining gradually and fell in at the beginning of the 90s as a result of a voluntary disintegration of the USSR, Comecon and the Warsaw Treaty Organization, a radical reverse of a geopolitical course, a refusal from ex friends and allies to the extent of a direct betrayal (as it formed with the Najibullah regime Afghanistan) and a blind following in the wake of the US policy, a powerful super power as it used to be turned into an ordinary state with ample territories and Imperial ambitions, but a less and less influential and weakening state. An outburst of awareness of specifics of its civilizational interests and weak confrontations with the West occurred from time to time (especially talentless military campaigns in Chechnya), but the main geopolitical course remained the same, although the line towards the formation of a multipolar peace was proclaimed and amicable contacts with other civilizations were restored, first of all, with Chinese and Indian. Only in the recent years, they have begun to advance Russia's geopolitical interests more well-defined and consistently, but the opportunities and resources for doing so have been lost in many ways. The influence is falling event in the area of near abroad, especially after «color» revolutions in Georgia, Ukraine, Kirghizia, a coming change of leaders in other CIS countries, under a lack of a long-range foreign economic and integration strategy. As a result under the pessimistic scenario

Russia's influence will fall from recent 4 to 2, in actual fact, it will become the object to divide among stronger civilizations – North American, Chinese and Japanese (see the map in *fig. 15.5.–18*, p. 218–219). Some western and southern neighbors are already making their territorial claims.

Under the optimistic scenario after the year 2010 they will succeed in consolidation of the country and a gradual restoration of Russia's geopolitical influence (up to the estimation of 6.5 in 2050), however it will not already return to the indicators of the middle of the 20<sup>th</sup> c. It has been lost too much. It is possible the rapprochement of geopolitical positions within the CIS, although losses are especially high here as a result of strategic errors made by the political elite of both Russia and neighboring countries. It is quite problematic to speak about the restoration of the state-political unity of the Eurasian civilization in this or that form at least in outlook for the mid – 21<sup>st</sup> c.

The geopolitical influence of Russia is maintained due to its status of the nuclear power still preserved. According to **S.M. Rogov** [170], by the end of the 20<sup>th</sup> c. while occupying 1.2% of the world military expenditure and 2.9% of the number of armed forces, Russia has 55% stockpiles of nuclear weapons. According to the World Bank, in 2003 Russia's military expenses made 4.3% of GDP and 18.8% of the central government's expenditure (world average figures 2.6 and 10.8 respectively), the number of armed forces – 1,370 thous. persons (4.9% of the world) – 1.7% of manpower (0.9% in the world) [271, p. 300]. However, the overall assessment of armed forces which after the victory in World War II and the creation of the missile-nuclear shield reached 9, it fell up to 7 by 1990, and by 2000, it dropped up to 4.1 – as a result of the failed conversion, many time reduction of purchases of arms for own army, a loss of defense space and decline of the battle efficiency of the armed forces.

The measures aimed at the enhancement of battle efficiency of the armed forces and improvement of its fitting-out with sophisticated weapons that were implemented at the beginning of the 21<sup>st</sup> c. have given certain results, but they are unable to reverse radically the tendency. Depopulation, worsening of population's health and a loss of image by military service reduces and will reduce the base for a numerous army based on call-up. The creation of a professional army based on contracts requires enormous expenditures. The system of weapons exceeds a standard lifetime and they are replenished only partially. Therefore, even under an optimistic scenario the esti-

mation of this component will grow only partially (from 4.1 to 6.2), and under pessimistic it will fall up to 1.8, the missile-nuclear shield will remain symbolically in many ways. This will become one more factor of weakening and a possible division of Russia.

**6. A spiritual sphere** that maintained its comparatively high estimation before 1980 (7–8 points) by major components – science, education, culture – began to lose its weight already in the 80s, and by 2000 – it dropped up to 4.7 points – especially due to science, ethics and ideology, a wave of anti-culture. Meanwhile, the fate of the country depends in a decisive degree on the sphere of spiritual reproduction where Russia has occupied traditionally one of the leading places with its distinctive feature – high spirituality. The attempt to refuse from the own civilizational identity, to take the values of the West, a decaying sensual sociocultural order could not lead to anything good. A many time reduction of financing of science and culture, standardization of education according to western models, implantation of market ethic values, wind-down of ideological activities have stricken a heavy blow to the spiritual sphere of the Russian civilization.

What are the *scenarios for the development of the spiritual sphere for an outlook?* Under the inertia-based scenario it will be inevitably ruined with a fall of the estimation from 4.7 to 2.2. The optimistic scenario gives a chance for a spiritual revival and an increase of the estimation up to 7.4 by 2050. Let's examine possible dynamics of the components that make such factor.

For the decade and a half elapsed **science** has suffered irreparable losses, especially in the field of engineering sciences and design art – the foundation of the innovative development. If the present day course persists, most scientific schools will finally pass into the history, Russia will lose the own scientific base and will be oriented at import of scientific achievements and technologies. Expenses for R&D already make 1.25% of the GDP to 2.36% of the world average and 2.54% for the countries with high level of income; expenses for obtaining licenses exceed income from their sales 4.1 times (0.19% of world's); the number of applications for patents from residents – 2.6% of world's; a share in the world high-tech export – 0.51% [ibid, p. 316].

It is a better situation in the field of public sciences where no large investments are required in equipment and where it is observed an active formation of the post-industrial scientific paradigm resting on the scientific heritage of **N.D. Kondratieff**,

**P.A. Sorokin, A.A. Bogdanov** and other scholars. In the field of natural and engineering sciences the tendency may change only in the event of the reintegration of science and higher education that will ensure the inflow of a new generation of scientists in science and fresh ideas. However, the change in the trajectory of the development of national science, formation of new scientific schools is possible only under an active support of the state and entrepreneurial sector, a growth of the need for science as a foundation for the innovative development of the country. In such case, the estimation of science could advance from 4 to 7, it will again take the leading positions in the world by a number of directions (although not in such extensive front as it used to be in the 50–70s) of the country's innovative development.

The sphere of *education* has suffered less badly the blows of market reforms; the integral estimation dropped from 6.7 in 1980 up to 5.1 in 2000. However, the quality of education worsened. A refusal from the national creative pedagogy and transition to the western models and standard will aggravate this tendency. The system of continuous education has not gained a proper development at that, it is more and more difficult for the youth to adapt to the changing conditions of labor and a daily round (while it masters the information technologies fast, but the educational contents of the information-communication channels obviously go behind). Therefore the professional incompetence is becoming an increasingly widespread. As a result the estimation of this component may fall from 5.1 to 2.8 under the unfavorable scenario.

Under the optimistic scenario, the restoring of the role played by the role of creative pedagogy, involvement of the continuous education system, formation of various educational networks in the Internet, a present-day crisis in the education may be handled. Its estimation will rise from 7.8 by 2050, and the innovative-oriented human resource base will be created thereby for the transformation of all spheres of society.

While suffered heavy losses for the period of market reforms the sphere of *culture* has comparatively easier adopted to new conditions. A loss of estimation has made 1 point only. However, a reduction of the state support to culture, strengthening of negative tendencies in future may lead to a fall of such estimation up to 2.9 points – two times. The opposite tendency may be observed in the overcoming of the wave of anti-culture surged from the West and the revival of high cultural that is characteristic of Russia. The

Internet, television may play a significant role in that. Under such scenario the estimation may increase up to 8, and the role of Russia as one of the leaders in a geocivilizational space of culture.

*Ethics* and *ideology* have suffered a heavy loss as a result of the civilizational crisis. A collectivistic ethics that is typical of the Russian civilization has started to be replaced by individualistic, an itch for gain has triumphed, negligence to weak, pursuit of sexual pleasures, devaluation of a human life. The number of crimes was growing, including contracted murders. Revived *religious communities* (Orthodox, Moslem, Buddhist etc.) tried to prevent it, but their influence turned to be limited. The generation of the 90s has turned to be in the state of ethical crisis, a loss of moral rectitude that became one of the factors for depopulation, social instability, and innovative helplessness.

If under the inertia-based scenario the tendency of moral degradation continues and the state of ideological lack of prospects persists under a weak counteraction on the part of religions, the general estimation of this component will reduce from 3.2 to 1.3. However, it is possible a real and opposite tendency, a return to ethic values typical of Russia (which meet the nature of the humanistic post-industrial civilization), if the state and civil society are able to define high aims and launch activities for the implementation of humanistic ideals, and the communities of various religions intensify their influence on the upbringing and support of the system of ethic values.

**7. The outlooks of the integral estimation for the dynamics of the Russian civilization.** The summary influence of the foregoing six factors gives the following picture of Russia's dynamics and its place in a geocivilizational space of the 21<sup>st</sup> century under two scenarios.

Under the inertia-based scenario, persistence of the tendencies formed now, the degradation of Russia will go on (with a possible disintegration by the end of the period as it was the case at the end of the 20<sup>th</sup> c. with the Eurasian civilization) and a loss of its influence in a geocivilizational space. In such case, the integral estimation will fall 2.6 times (from 4.4 to 1.7 points), while demographic, technological and economic factors influence it most of all. In actual fact, it will mean the completion of a life cycle of the local civilizations, transformation of its remains into the field for division of the territory and resources for other civilizations. The gloomy prediction of **Pitirim Sorokin** will fulfill: «Any great culture which ends its life transforming into... a variant of a permanent “dump”, loses its individuality and becomes simply a material, just “civilizational

manure and fertilizer” for other great civilizations or cultural systems»[181, p. 171].

However, such tragic result is not unavoidable, imminent at all. The awareness of the reality of such threat by many people, first of all, its healthy forces, scientists, figures of art, oncoming generation will give rise to a new energy to respond to such deadly challenge as it used to be in the history of the Russian civilization. This will enable to take the path towards the revival of Russia and increase of its role in the dialogue among civilizations of the East, West and South, in the solution of global problems of the 21<sup>st</sup> century. The spiritual sphere (an increase up to 7.4 points), the strategy of an innovative breakthrough (a growth of the technological factor up to 6.8 points) may make an important contribution to the revival. The restricting factors will remain demographic (3.2 points) and natural-ecological (5.8 points). However, the attainment of the level of the first after-war decades when the integral estimation exceeded 7 points is not real, the Russian civilization has suffered two heavy losses as a result of the acute crisis and degradation of the 20<sup>th</sup> c., a disintegration of the USSR and gross strategic errors made by the ruling elite.

However, the time for choosing the scenario is limited by 3–5 years; after that the movement according to the inertia-based, pessimistic scenario will become inevitable, a historic sentence to the Russian civilization will be signed and implemented.

The responsibility for a timely choice and implementation of the optimistic scenario is charged with:

➡ scientists, thinkers, men of culture – artistic elite of civilization which should realize, form accurately an alternative scenario of development and make all strata of society be aware of it (present and future generations);

➡ business, political and ruling elite which should realize all its responsibility to society, work out and implement consistently a long-term, efficient strategy of saving and revival of Russia;

➡ an active part of the generation of the 20s to whom the center of gravity will begin to pass in decision making that will determine the fate of Russia and its place in a geocivilizational space of the 21<sup>st</sup> c., its inclusion in the system of epochal innovation of this century.

Since 2005 signs of the choice and realization of the strategy, aimed at innovational breakthrough have appeared in Russia. As an example, three national projects can be mentioned – in the field of

health care, education, housing and communal services and agriculture. If this tendency persists and intensifies, if the strategy of an innovational breakthrough is realized in actual fact, the probability of the optimistic scenario will become much higher.

## **16.4. Russian Science in the Geocivilizational Space of the 21<sup>st</sup> Century<sup>1</sup>**

### **16.4.1. Crisis of Modern Science**

The development of sciences obeys cyclical regularities. A previous crisis of sciences dates back to the turn of the 19<sup>th</sup>–20<sup>th</sup> c. The overcoming of such crisis fostered the emergence of the formulation of the theory of relativity and quantum mechanics – branch of sciences that determined the development vector of both fundamental and applied scientific researches throughout the 20<sup>th</sup> century.

Both specific and universal signs of crisis of science exist. The latter includes two moments that could seem mutually exclusive. First, this is the conviction of most part of the scientific community that nearly all unclear problems have already been solved and the construction of a harmonious building of science is just about to be completed. Second, this is the existence of the facts proved experimentally that are impossible to explain remaining within framework of the prevailing scientific paradigm.

Celebrating the beginning of the 20<sup>th</sup> c. Lord Kelvin (W. Thomson), outstanding physicist of that time proposed a toast to a «clear sky of the theoretical physics with only two small clouds left». The scientist believed that such «small clouds» were a failure of the Michelson-Morley experiment to detect ether and the so-called «ultra-violet catastrophe». Kelvin overstressed the successes of science contemporary to him, but he defined accurately its two problematic areas – to clarify the first of them, which resulted in the formulation of the theory of relativity, and the second – quantum mechanics.

There is one more universal sign of crisis of science that is included not in the crisis itself, but in fundamentally new ideas serving as

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<sup>1</sup> This section is written by Prof. [\[L.V. Leskov\]](#), Doctor of Physics and Mathematics, Academician of the Russian Academy of Natural Sciences.

a base of its handling. Such sign is a flat denial of new ideas by some authoritative scientists of the older generation. At the beginning of the 20<sup>th</sup> c. such position was maintained by E. Mach.

The science of the threshold of the 20<sup>th</sup>–21<sup>st</sup> century has turned out to be in the state of the next crisis. Major fundamental problems that can't be solved without leaving the boundaries of the prevailing scientific paradigm are in the field of physics of space vacuum (completed theory of the origin of the Universe, discovery of the anti-gravitation phenomenon) and theoretical biology (origin of nucleotides, origin of a uniform genetic code).

At the same time the belief is strengthened that in the years immediately ahead the formulation of the Last Theory of All will be completed – the awareness of such fact constitutes the second universal sign of crisis in science. The theory of super strings claims to this role. The theoreticians working in this field believe that they will be able to estimate the quantum characteristics of all elementary particles (value of mass, charge, spin etc), and also the constants of fundamental interactions – gravitational, electromagnetic, strong and weak. However, they've failed to solve this task yet.

Now the specific signs of crisis in sciences have also manifested themselves as clearly as universal. The first of them is included in the problem of so-called «experimental zero-gravity»: some forecasts of the theory are very difficult to verify experimentally (inflationary cosmology, forecasts of the Higgs boson etc)

Another specific feature of the crisis is connected therewith: some theoreticians have begun to deviate from the postulates of Galilean science that all scientific community adhered to throughout four hundred years. The sense of such postulates is that a correctly ran experiment in terms of methodology underlies the self-movement of scientific cognition. It appears that the attempts to shift the center of gravity of the development of science to the field of formulating pure theories originally not resting on experiment are fruitless.

The third specific feature of crisis in science of the beginning of the 21<sup>st</sup> c. is the penetration of ideas of the post-modernist philosophy (discredit of rationalism adopted by science in the Enlightenment, refusal from the search for truth, asserted completed nature of scientific knowledge which has the Form of the Text wherefrom only various quotations are possible, priority of virtuality over reality etc) into the field of human scientific knowledge.

The fourth specific sign of crisis is determined by the nature of the period – the emergence of the post-industrial society as a product of late capitalism and information technologies. This sign manifests itself in increase of the level of financing of applied scientific researches by corporate scientific organizations and institutions, and first of all those that have an a priori given plan. The reverse side of such process is lessening of the support to the university science, which has focused always on the problems of fundamental scientific knowledge.

The fifth sign of crisis in science is the inability of the intellectual elite to work out a technological complex that would ensure the handling of such global crisis and a transition of society to sustainable development. For instance, Weizsäcker and his associates have cautioned about this weakness of scientific paradigm, which is extremely dangerous for the fate of humankind, in the recent report to the Club of Rome.

All these universal and specific signs of crisis in science also clearly manifest themselves in Russia. But the disintegration of the economic life of the country intensifies them considerably, which was determined by pseudo-liberal reforms launched in the 1990s and continuing until now. The maintenance of the same course of reforms is detrimental for the country and its population in general, and to serious scientific researches in particular. In case they are totally terminated, the country will inevitably turn from an independent state into the elementary geographical space delivering the subsoil assets to the «golden billion».

#### **16.4.2. Pessimistic Scenario of the Future of the Russian Science**

The government of Russia supported by the «United Russia» party that hold the parliamentary majority adheres to the principle of «minimal state». Such principal is characteristic of the post-industrial society when the administration of business life in world scale comes under control of international financial capital, and the role of a sovereign state is mainly reduced to the service of interests of such capital.

Proceeding from such logic the leaders of financial and economic blocs in the government hold the viewpoint that the development of country's economy should be determined by business and market,

and the state should interfere in their activity as little as possible. Therefore, the government does not need scientific recommendations for the improvement of economic development efficiency. This postulate determines the attitude of the leadership of the country to science.

The reform of science in Russia to be spoken much about lately is mainly reduced to the restructuring of the managerial bodies of the Russian Academy of Sciences and transformation of the system of education. There are no signs yet that these measures will considerably improve the situation.

Thus, the prerequisites for negative changes in the sphere of science of Russia are quite serious. But does it mean that a scientific life in Russia will stop completely? Of course, it is not so. But if the attitude to science does not change, its development will be determined mainly by interests of international financial capital.

A domestic fundamental science will suffer most at such approach: international capital is not interested at all to develop it. It will support and finance only those applied scientific researches, and also researches aimed at prospecting new deposits of natural resources (first of all, energy), improving the efficiency of their production and transportation to the centers of consumption.

The researches into the enhancement of efficiency of power economy of the country, first of all, promising systems of nuclear power engineering will be developed (breeders — fast neutron reactors). This branch will get financing, as well as it might count on the placement of international orders.

A domestic rocket and space industry is built in the world market strongly enough. It might be anticipated that the development of new promising boosters and recovery aviation and space ships will improve our competitiveness in a global scale.

There is one more reserve for support of scientific activity in Russia. Private companies operating mainly in the power and raw material sector have already demonstrated their interest in the development of promising applied researches and they are able to become a base of innovative technologies maintaining the competitiveness of Russia on the world market. Successes of the Soviet science have made it possible to create a large scientific reserve in a number of scientific studies (hydrogen power engineering, nanotechnologies, molecular biology, space technology, quantum-vacuum technology etc) resting on which a major technological breakthrough might be made.

### **16.4.3. Optimistic Scenario of the Development of Russian Science**

The preconditions for the transition to such scenario include the following factors:

➡ rapid aggravation of the signs of a global crisis and global environmental catastrophe. Only the awareness of this fact could make the world political elite demonstrate an intense interest in the development of scientific foundations of the fundamentally new innovative technologies;

➡ pressure on the authorities on the part of civil society gaining momentum in Russia;

➡ a serious scientific reserve in the sphere of high-efficiency and environmentally friendly innovative technologies;

➡ an opportunity to keep a creative potential of scientific community that has properties of self-developing system, including the nascence of young, promising generation of enthusiastic scientists.

Expounding on the last comment, let's recall: the theory of relativity was developed by a 26 years old expert of the 3<sup>rd</sup> rank from the patent bureau in Bern **Albert Einstein**, and the first theorem that removed the problem of «ultra-violet catastrophe» and gave an impetus to quantum mechanics was proved by young professor of the Berlin University Max Planck.

In case these preconditions are implemented, the development of science will be based on a favorable scenario. Let's dwell first of all on the development of the fundamental science. A major distinguishing feature of the future socio-political situation in the country in that part pertaining to the fundamental science is that a social order will arise for researches in this area. It will be first of all determined by the fact that the leadership of the country will understand that fundamental scientific knowledge is the best source of power and effective tool in struggle for survival. Second, civil society becomes aware that the fundamental science is the best support for the development of education, culture and intellectual potential of population.

It might be anticipated that those lines of fundamental science that had a considerable scientific potential in the USSR will be developing most actively. Let's list major:

➡ physics of high energy and structure of elementary particles;

➡ physics of solid body and microelectronics;

➡ physics of extremal state of matter;

- molecular biology;
- cosmology and the Universe evolution problems;
- space researches (solar-terrestrial relationship, planetary exploration and satellites thereof, all wave astronomy, expedition to the Mars etc.);
- formulation of the universal theory that unites all types of fundamental interactions;
- physics of space vacuum;
- development of the Big Bang theory and black holes;
- physics of quantum vacuum.

Not less attention will be paid to the fundamental researches, which should serve a base of the solution of practical tasks. Let's mention only a few of them:

- creation of nuclear-fusion reactor;
- development of non-waste atomic power plant of complete cycle;
- hydrogen power engineering;
- development of quantum-vacuum sources of power;
- development of torsional technologies for material processing;
- search for fundamentally new sources of power;
- improvement of the artificial intellect systems;
- development of new systems of transport (trains on air cushion etc.);
- creation of high-efficient genetically modified varieties of plants;
- development of biological methods of pest control;
- development of new classes of materials;
- creation of new treatment modes of cardiovascular disease, AIDS etc.
- search for new treatment modes in neurophysiology;
- development of nanotechnologies and biorobots;
- advent of new classes of semiconductor converters;
- development of new methods for natural resources prospecting;
- determination of thermophysical, electrophysical and other fundamental constants.

Undoubtedly, this list will be completed in future.

Human branches of scientific knowledge will be actively developing along with the natural disciplines. They include archeological and linguistic researches, psychology, paleontology, socio- and futuro-synergetics, complex of logic disciplines, demography and ethnography etc. that are traditional of Russia.

Large scale philosophic and world view generalizations that will make a noticeable contribution to national culture and culture common to all mankind will be developing based on new achievements in the field of natural and human scientific knowledge.

The development of science under an optimistic scenario will mean that the country will be able to restore its potential, which suffered heavily during the years of a «liberal revolution». A balance between three major elements of competitive development of science – fundamental researches, applied science and creative initiative of enthusiasts – will be fixed.

The last element of this triad requires special comment. Under planned Soviet economy such type of entrepreneurial scientific activity was suppressed severely as a rule. It made one of the reasons that led the country to catastrophe: the bureaucratic system of administration is unable to monitor the dynamics of a scientific-technological advance. The remnants of tough administration of science still survive in the Russian Academy of Sciences to this day adding to an extremely low research intensity of national industry.

All these failures will be removed under the optimistic scenario. It will allow developing equally successfully fundamental and applied scientific researches in the system of reformed academic institutions, at the universities, corporate scientific organizations and social academies.

The problem of training of young researches will be solved. The universities will get advanced laboratory equipment, and professors, students and young specialists – sufficient financing and material support.

#### **16.4.4. Place of Russia in the World Scientific Community**

Margaret Thatcher called the Soviet Union without reason «Ivory Coast with missiles». The Soviet science occupied the leading or advanced positions in many scientific and scientific-technological trends. It is not by chance the western political elite felt constant fear that our country would make a new breakthrough in science. The «Iron Lady» calmed down only when the Soviet Union disintegrated and she could let off envenomed jokes at it.

The optimistic scenario of the future of our science means restoration of former significance of Russia in the world. With an

essential distinction that its place used to be determined by its defense capability before, and now it will be determined by its competitiveness in the world of fundamental science and innovative technologies.

Under such conditions the participation of Russia in international research projects will play a role of prime significance. The scale of modern science is so that many projects can be implemented only within framework of international cooperation. These are the projects in the field of space and missile technology, nuclear and thermonuclear power engineering, environmental conservation, «green revolution», human genome, development of new medical and biological practices etc.

Choosing the optimistic variant of development of science Russia will be evolving towards sustainable future.

## **PART 5**

# **GEOCIVILIZATIONAL MEASUREMENTS**

**Chapter 17. Cliometric Measurements  
of Civilizational Dynamics**

**Chapter 18. Measurements  
of Civilizational Dynamics:  
a Geocivilizational Matrix**

**Chapter 19. Strategic Matrices  
of Eastern Civilizations  
Dynamics**

**T**heoretical fundamentals and historical inquiries into dynamics and interconnection of civilizations assume validity when they rest on quantitative measurements and estimates. However, such estimates are difficult to make for a long-range historical retrospect as there are no reliable statistic data. In recent decades methods for measurement of geocivilizational dynamics resting on Delphi approaches have been worked. In the chapters of this part methodology and examples of such historiometric (cliometric) measurements, including those performed by the Institute for Economic Strategies and the Pitirim Sorokin-Nikolai Kondratieff International Institute are presented. They have been performed on the basis a strategic matrix, geocivilizational matrix, situational analysis and forecast of Russia's place in a geocivilizational space.

The research doesn't claim for consistency and definite completeness. A great deal of estimations should be required to prove scrupulously the offered methodics.

## Chapter 17

# CLIOMETRIC MEASUREMENTS OF CIVILIZATIONAL DYNAMICS



**B**ased on the selected criteria historio-metric (cliometric) measurements are the latest and highly efficient method for inquiry into the dynamics of civilizations. This method that found a wide application in the historical science in the 20<sup>th</sup> c. has been applied for the first time by us for quantitative measurements of dynamics and relation of local civilizations, stages of development of world and global civilizations. In spite of a certain convention of the obtained results due to the lack of reliable data on the first stages of civilizations history and subjectivity of the experts' assessment, this method allows to reveal new sides in the multivariate cyclic dynamics of civilizational process.

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## 17.1. Cliometry as a Method of Historical Researches



Since the times of **Herodotus** (484–425 B.C.), historical science has used a *descriptive method*. Historians described conscientiously available significant facts, events, personalities who had shown themselves in such events. Historians used literary sources, evidence of witnesses, legends, their own observations (for instance, Herodotus made a long trip to Olvia and other Greek cities of the north region of the Black Sea, Scythia for such purposes). The historian's own position was expressed both in the choice of historical factors and events described and their assessment, attempts to identify a link between them. History constituted a descriptive, ideographic science, hortative for its contemporaries.

Another, higher level of development of methodology of historical science was achieved when the historians began to identify *tendencies and regularities of historical development* based on the assessment of facts and events; thus history turned into an abstract, nominalistic science and *philosophy of history* was formed. We find the rudiments of such approach with Chinese historian **Sima Qian** (145–86 B.C.) who viewed the history of society as a closed circuit. This idea was further developed by Arabic historians **Al-Biruni** (973–

1050) who put forwarded a hypothesis about the existence of large historical cycles and **Ibn-Khaldoun** (1332–1406) who is one of the founders of philosophy of history that includes a theory of historical cycles.

The ideas of a cyclical regularity of historical process were expanded by Italian scientist **Giambattista Vico** (1668–1744) and German scientist **J.G. Herder** (1744–1803) who expounded the approaches to genetic laws of development of humankind in his book «Outlines of Philosophy of the History of Man». In the 19<sup>th</sup> c. **G. Hegel, K. Marx, I. Kant** and many other scientists in various countries inquired into the regularities of historical development.

Similar ideas were put forward in Russia specifically in the works of **M.M. Kovalevsky** (1851–1916) – the founder of the Russian sociology and a historian of economic life. His talented follower **N.D. Kondratieff** (1892–1938) published a profound article «Major Doctrines of the Laws of Development of Social Life» in 1914 where he disputed the views of the scientists who negated the regularities in the historical development and corroborated additionally the position of the scientists who recognize empirical and abstract historical laws [87, p. 84–115].

The 20<sup>th</sup> century completed the armory of historical methodology by one more tool of cognition – *historiometry* or by a more known definition – *cliometric* (Clio is a muse of history). **A. L. Chizhevsky** (1897–1964) was probably one of the founders of the formation of this direction, defended a doctoral thesis devoted to this theme at the Moscow University in 1918, and published a brochure «Physical Factors of Historical Process» in 1924 in Kaluga [229]. A.L. Chizhevsky laid *historiometrical cycles* approximately equal to solar cycles – fluctuations in solar activity, 9 in each century, in the foundation of the cycles of historical development identified by him. Having summarized historical events for two and a half millennia he distinguished 4 phases in the structure of these cycles of average duration of 11 years: 3 years of minimum excitability (5% of historical events of each cycle); 2 years of increasing excitability (20% of events); 3 years of maximum excitability (60% of events); 3 years of a fall in excitability (15% of events) [ibid, p. 28, 29, 33]. For the first time the regularities of historical cycles got a clear mathematical definition. Moreover, the opportunity to foresee crisis phases appeared: «In 1927–1929 the oncoming of solar maximum activity should be expected – it is likely that major historical events which would change the geographical map again will occur in these years

due to the existence of the factors of a socio-political order» [ibid, p. 69]. And really, 1929 and next years were marked by the deepest economic crisis of the entire history, fascists came to power in Germany and unleashed World War II in the next period of high solar activity, NEP based on ideas of «market socialism» and comparatively democratic political system was replaced by Stalin totalitarianism in the USSR.

The next step in the development of the new direction was made by **N.D. Kondratieff** mentioned above. In the work «World Economy and its Conjunctures during and after the War» published in 1922 he gave a statistical description of dynamics of economy in the period of World War I, post-war economic cycle and stated the fundamentals of the concept of large cycles of conjuncture of approximately a semi-century duration: «Dynamics of economic conjuncture is different. A period of high conjuncture is replaced more or less sharply with a period of down conjuncture. One has to distinguish two major types of cycles of such fluctuations: large cycle embracing about fifty years and small industrial-capitalist cycle embracing a usual period of 8–11 years» [86, p. 322].

This concept was developed in further works of the scientist, and first of all in the report «Large Cycles of Economic Conjuncture» presented at the discussion at the Economy Institute in 1926 and in the last work «Dynamics of Prices for Industrial and Agricultural Goods» (1928) published when he was alive. Having proved using mathematics-statistical methods of the existence of long-wave fluctuations in various spheres of economy **N.D. Kondratieff** linked these fluctuations with changes in other spheres of social life: «The periods of up waves of large cycles as a rule are considerably richer in major social upheavals and overturns in society's life (revolutions, waves) than the periods of down waves» [ibid, p. 374]. Basically the matter in question is long-term historical cycles here.

Quantitative measurements of historical processes were further developed by French *school* «*Annales*» founded in the 20s by **Marc Bloch** and **Lucien Febre**; **Fernand Braudel** who could be possibly viewed as a leading historian of the 20<sup>th</sup> c. is a most known representative of this school. This school among other things was busy with inquiries into and measurement of historical cycles of various durations – from medium-term and long-term to century and millennium. **Francois Furet** noted a major feature of this histor-

ical school: «In France... the movement that got the name of historical school “Annales” in the 30s, is obliged by its innovative character to a great extent to its dual attraction, to the poles mutually completing each other: quantitative history and statistical models in economy as a fundamental measurement of every evolution» [207, p. 245]. The data on long tendencies in the movement of prices as indicators of economic processes and conjunctures, demographic indicators etc. were laid as a basis of a quantitative estimate of historical processes. «Thus, the notion about plurality of times differing from each other was introduced into economic history: many-century or secular “trend”, cycles within such “trend”, annual movements within cycles and seasonal fluctuations within a year... The demographic studies in pre-revolutionary France... altogether corroborated the model of cyclical food crises having demonstrated the existence of periodic demographic declines» [ibid, p. 246–247]. Such approach changed the understanding of the subject of historical science: «The analysis of the entire aggregate of variables, inquiry into the relations between values of a significant nature should be the subject of quantitative history» [ibid, p. 253].

The significance of this direction in the historical science was emphasized in the article of another historian, **Peter Laslette**, the head of the Cambridge group of historical demography: «Of all latest tendencies in historiography, econometric history contrasts most obviously and sharply with traditionally historical researches. Its fast development in recent years necessarily requires considering the issue of quantification of historical researches and its impact on the relation of history and social sciences» [ibid, p. 210].

The quantitative direction in historical studies was taken up and further developed by a contemporary institutional school and, first of all, one of its recognized leaders, **Douglas Nord** who got the Noble Prize in economic sciences for researches into *cliometry*.

Cliometric researches are also carried out in modern Russia. It may be demonstrated on the example of researches in cyclicity of historical events conducted in 2001 (§ 15.2) as well as the application of a strategic matrix for identification of historical tendencies (§15.3, *supplement 2*) and also the research on a quantitative estimate of dynamics of local and world civilizations for two millennia and forecast of their development in the 21<sup>st</sup> c. conducted by the Institute for Economic Strategies and the P. Sorokin–N. Kondratieff International Institute under the lead of the authors of this book in summer 2005 (*Ch. 16*).

reforms. *Table 16.4* gives the data on the shifts in the sectoral structure based on the system of national accounts.

Housing and utilities, agriculture have lost most in the weight; trade and finance and credit services of economy have taken on (3.8 times), administration and defense (by 85%). One should not forget that it has occurred against the background of a general fall of GDP output (nearly double by 1998) and an uneven growth of prices, large-scale redistribution of actual value created through prices in favor of the sectors representing the sphere of distribution which freeloaded for account of the sphere of production and real income of population.

The persistence, and the more so the deepening of these structural disproportions and deformations will aggravate even more the non-competitiveness of the Russian economy, its inability to respond to the challenges of the 21<sup>st</sup> century. ***Only based on the long-range structural policy actively pursued and supported by the state*** such formed tendencies could be reversed and a real turn to the optimistic, innovative scenario could be reached. This policy should include:

➡ the course for the priority development and innovative renewal of the sectors engaged in saturation of the consumer market and reproduction of human capital (agroindustrial complex, consumer goods industry, services, housing and utilities, consumer and social services, science, machine-building industry);

➡ restriction of the growth rates of the sectors making the sphere of distribution (especially swollen, with many intermediaries and high transactional costs of trade);

➡ a gradual overcoming of disproportions that have formed in prices and first of all in the counteraction of overstated prices by monopolies.

**Thirdly**, *the key direction in the regulation of economic dynamics and structural shifts is a radical improvement of institutional transformations, functioning of mixed economy, overcoming of critical situations that have formed here for the years of reforms.* If the inertia-based scenario is implemented, a low efficiency of mixed economy, parasitic nature of monopolistically capitalistic order persist (merging with the state machinery, it transforms into the state-monopolistic capitalism of a rentier type); a suppressed small commodity order that is still minor in terms of its specific weight – small businesses, farmers, individual manufactures; a low efficiency of the governmental sector being gradually privatized; an unreasonably high specific

The intensity of historical events (calculated for five years) increased from 20.6 in 1751–1775 to 213 in 1976–1995 – in 10.3 times. Even adjusted for an inevitable aberration in time the tendency towards the increase in the intensity of historical process declares itself (although it is uneven, there are periods when the intensity weakens, for instance, in 1826–1850, 1951–1975).

This tendency is first of all explained by a growth in number and density of population, increase in the number of «actors» on the historical arena. For 245 years the population number on the Earth increased 7.9 times. Ethnical, national, religious and civilizational diversity increased many times. As a matter of course it has become a major factor of intensification of historical process, increase in the number of significant events. But the impact of other factors – speed up of the rates of scientific-technological and economic advance, etc is also probable.

**2. The intensity of historical process is uneven;** it is subjected to considerable fluctuations which are of a cyclical nature. It is easy to see analyzing the data in *table 17.1* and *17.2*. The peaks of intensity of historical events are seen in 1791–1795, 1811–1815, 1846–1850,

Table 17.1

**Intensity and Distribution of Historical Events  
by Civilizations in the Industrial Period  
(1751–1995)**

Periods	Total	Europe	East	America	Russia	Years with Maximum Number of Events
1751-1755	13	7	1	2	3	1759-5
1756-1760	16	10	1	1	4	1757, 59, 60-4
1761-1765	21	10	2	1	8	1762-8
1766-1770	22	11	3	2	6	1768-8
1771-1775	31	14	3	7	7	1775-9
<b>1751-1775<sup>1</sup></b>	<b>103/100</b>	<b>52/52,5</b>	<b>10/9,7</b>	<b>13/12,6</b>	<b>28/27,2</b>	<b>1775-9</b>
1776-1780	38	24	10	1	3	1776-15
1781-1785	28	17	2	1	8	1783-10
1786-1790	49	32	5	2	10	1789-22, 1790-13
1791-1795	97	70	4	11	12	1793-25, 1792-19
1796-1800	52	37	5	3	7	1796, 97-14
<b>1776-1800</b>	<b>264/100</b>	<b>180/68,2</b>	<b>26/9,8</b>	<b>18/6,8</b>	<b>40/15,2</b>	<b>1796-25, 1789-22</b>

Table 17.1

Periods	Total	Europe	East	America	Russia	Years with Maximum Number of Events
<b>1751-1800</b>	<b>366/100</b>	<b>232/63,4</b>	<b>36/9,8</b>	<b>31/18,6</b>	<b>68/18,6</b>	<b>1793 - 25, 1789 - 22</b>
1801-1810	68	45	5	8	10	1806-25, 1809 - 13
1811-1815	86	51	7	13	15	1815 - 25, 1814 - 23
1816-1820	29	10	2	8	9	1817 - 9, 1818 - 7
1821-1825	46	24	4	8	10	1822, 1825 - no 14
<b>1801-1825</b>	<b>281/100</b>	<b>163/58</b>	<b>22/7,8</b>	<b>42/14,9</b>	<b>54/19,2</b>	<b>1815 - no 18</b>
1826-1830	52	28	8	8	8	1830 - 18
1831-1835	65	35	8	3	19	1834 - 18, 1832 - 17
1836-1840	39	20	7	3	9	1840-16
1841-1845	22	11	4	2	5	1841 - 7
1846-1850	66	40	9	8	8	1848 - 34
<b>1826-1850</b>	<b>244/100</b>	<b>134/54,9</b>	<b>36/14,8</b>	<b>24/9,8</b>	<b>49/20,1</b>	<b>1848 - 34, 1830, 34 - no 18</b>
<b>1801-1850</b>	<b>525/100</b>	<b>297/56,6</b>	<b>58/11</b>	<b>66/12,6</b>	<b>103/19,6</b>	<b>1848 - 34, 1816, 1815 - no 25</b>
1851-1855	53	23	10	3	17	1854 - 20, 1851 - 14
1856-1860	53	30	10	6	7	1859, 1860 - no 14
1861-1865	64	42	3	13	6	1865 - 14, 1862 - 64 - no 13
1866-1870	55	34	6	9	6	1867 - 17, 1870 - 14
1871-1875	57	40	5	9	3	1875 - 17, 1871 - 15
<b>1851-1875</b>	<b>282/100</b>	<b>169/59,9</b>	<b>34/12,1</b>	<b>40/13,8</b>	<b>39/14,2</b>	<b>1867/1875 - no 17</b>
1876-1880	50	28	9	9	4	1878 - 14
1881-1885	63	33	9	13	4	1881 - 16
1886-1890	47	30	6	9	1	1890 - 18
1891-1895	61	36	7	9	8	1895 - 16, 1894 - 15
1896-1900	79	50	3	16	7	1900 - 22, 1898 - 17
<b>1876-1900</b>	<b>300/100</b>	<b>177/59</b>	<b>34/11,3</b>	<b>56/18,7</b>	<b>24/8</b>	<b>1900 - 22, 1890 - 18</b>
<b>1851-1900</b>	<b>582/100</b>	<b>346/59,5</b>	<b>68/11,7</b>	<b>94/16,5</b>	<b>63/10,8</b>	<b>1900 - 22, 1890 - 18</b>
1901-1905	55	25	11	6	13	1904 - 13, 1901 - 12
1906-1910	42	23	9	3	7	1908 - 12, 1907 - 10
1911-1915	104	58	18	13	15	1914 - 50, 1911, 12 - no 16
1916-1920	165	81	20	11	53	1916 - 40, 1917 - 39
1921-1925	81	42	8	8	23	1920, 1924 - no 20
<b>1901-1925</b>	<b>447/100</b>	<b>229/51,2</b>	<b>66/14,8</b>	<b>41/9,2</b>	<b>111/23,4</b>	<b>1914 - 50, 1916 - 40, 1917 - 39</b>

Table 17.1

Periods	Total	Europe	East	America	Russia	Years with Maximum Number of Events
1926–1930	78	40	11	8	19	1926 – 25, 1929 – 15
1931–1935	81	40	8	7	22	1933 – 23
1936–1940	115	66	12	7	30	1936 – 29, 1939 – 28
1941–1945	193	80	40	13	60	1945 – 56, 1943 – 38
1946–1950	87	45	21	11	10	1947 – 21, 1946 – 19
<b>1926–1950</b>	<b>554/100</b>	<b>271/48,9</b>	<b>79/14,3</b>	<b>46/8,3</b>	<b>141/25,5</b>	<b>1945 – 56, 1936 – 29</b>
<b>1901–1950</b>	<b>1001/100</b>	<b>500/50</b>	<b>145/14,5</b>	<b>87/8,7</b>	<b>252/25,2</b>	<b>1945 – 56, 1914 – 50</b>
1951–1955	58	24	12	9	13	1953 – 17
1956–1960	87	32	20	17	15	1960 – 29
1961–1965	98	37	34	16	11	1963 – 26, 1961 – 25
1966–1970	81	35	24	11	11	1970– 19, 1968 – 17
1971–1975	78	37	17	12	12	1973 – 24
<b>1951–1975</b>	<b>402/100</b>	<b>165/40,2</b>	<b>107/26,6</b>	<b>65/16,2</b>	<b>52/12,9</b>	<b>1960 – 29, 1963 – 26</b>
1976–1980	91	41	26	16	8	1979 – 22, 1980 – 19
1981–1985	98	46	21	20	12	1985 – 31, 1984 – 29
1986–1990	272	104	56	29	83	1990 – 82, 1989 – 74
1991–1995	391	152	79	36	124	1992 – 103, 1991 – 92
<b>1976–1995<sup>1</sup></b>	<b>852/100</b>	<b>343/40,2</b>	<b>182/21,4</b>	<b>101/11,9</b>	<b>227/26,6</b>	<b>1992 – 103, 1991 – 92</b>

<sup>1</sup> In the denominator is the share of Europe (excluding Russia), East, America and Russia in the general number of events

1896–1900, 1916–1920, 1941–1945, 1961–1965 and 1986–1995. A minimum number of events was observed in 1751–1760, 1781–1785, 1816–1820, 1841–1845, 1886–1890, 1906–1910, 1926–1930, 1954–1960 and 1971–1975. Whereas the years with maximum events are also seen inside five year periods: for instance, in 1789 – 24 (under the average of 4.3 events per year for the 18<sup>th</sup> c); in 1900 – 22 and in 1890 – 18 (under the annual average of 5.1 events in the 19<sup>th</sup> c.) The 20<sup>th</sup> century is saturated with events maximally: under the average number of events of 18.6 a year for 1901–1995, in 1992 an absolute record was reached – 103 events; not much less in 1991 – 92 events.

**3. Historical events are distributed unevenly by local civilizations**, and within them this unevenness changes by periods of time. You may judge about it by the data in [table 17.3](#).

Table 17.2

**Growth of Intensity of Historical Process**

Industrial Period	Number of Events	On Average for Five Years	in % to 1751–1775	Coefficient of Speeding up to the Previous Period
	<b>3272</b>	<b>66,8</b>	251.1	-
1751–1775	103	20,6	100	-
1776–1800	264	52,8	255	2,56
1801–1825	281	56,2	277	1,06
1826–1850	244	48,8	250	0,87
1851–1875	282	56,4	268	1,16
1876–1900	300	60,0	290	1,06
1901–1925	447	89,4	444	1,49
1926–1950	554	110,8	537	1,24
1951–1975	402	80,4	390	0,73
1976–1995	852	213,0	824	2,65

The main actor was a western civilization in the historical arena in the first century and a half, from 63 to 78% historical events fell to its share, although its share of population was from 19 to 27%. A share of the East included from 8 to 12% of events, although from 65 to 77% of population of the world resided here. A share of Russia was 2–4 times higher in the historical events than in the population of the world; in the last quarter of the 19<sup>th</sup> century these shares became equal.

However, proportions changed in the 20<sup>th</sup> century. Historical activities of civilizations of the East and Russia considerably increased – against the background of a relative reduction in the intensity of historical events in the West. It indicates the revival of the East.

**4. Western Europe and Russia were the centers of historical activity in the industrial period.** On the average a half of historical events for 1751–1995 fell to foreign Europe, although its share in the population of the Earth did not exceed 17.8% (1990); by the end of the 20<sup>th</sup> century the historical activity dropped here by 40–41%. It was here that the history was made (although the impact of the aberration of place should not be excluded as the events were selected by western-European scientists). Only Russia could compete in historical activity with Europe – its share made 20.5% on the aver-

Table 17.3

**Distribution of Historical Events by Civilizations of the West, East and Russia, %**

Epochs, Periods	Distribution of Historical Events, %			A Share in the Number of Population World, %			
	West <sup>1</sup>	East <sup>2</sup>	Russia <sup>3</sup>	Years	West <sup>1</sup>	East <sup>2</sup>	Russia <sup>3</sup>
1751–1775	63,1	9,7	27,2	1750	18,1	76,8	4,7
1776–1800	75,0	9,8	15,2	1800	18,6	75,8	5,3
1801–1825	72,9	7,8	19,2				
1826–1850	64,2	9,8	20,1	1850	22,0	71,8	6,1
1851–1875	73,7	12,1	14,2				
1876–1900	77,7	11,3	8,0	1900	24,9	64,9	8,0
1901–1925	59,1	14,8	23,4	1920	29,7	61,1	8,7
1926–1950	57,2	14,3	25,5	1950	28,6	63,8	7,1
1951–1975	57,2	26,6	12,9	1975	25,3	67,9	6,2
1976–1995	52,1	21,3	26,6	1995	26,4 <sup>4</sup>	73,1 <sup>5</sup>	2,6 <sup>6</sup>
Total 1750–1995	62,5	16,0	20,5				

<sup>1</sup> Europe (without Russia, USSR) and America; <sup>2</sup> Asia (without Russia, USSR) and Africa;

<sup>3</sup> Russian Empire, USSR; <sup>4</sup> Including the European part of Russia and CIS;

<sup>5</sup> Including the Asian part of Russia and CIS; <sup>6</sup> Russia

age for 2.5 centuries – with fluctuations by individual 25 years from 8% (1876–1900) to 26.6% (1976–1995). This is 4–5 times higher than the number of population which did not increase 8.7% in its palmy days (1900–1940), and dropped considerably by the end of the 20<sup>th</sup> c. At the same time a share of the East (foreign Asia and Africa) was not high in the events of the world history during two centuries, many a time lower than a share in the number of population; only in the second half of the 20<sup>th</sup> century historical activity of the East increased considerably, especially in 1951–1975 (26.6% of historical events). A share of America made 11.7% for 2.5 centuries (that is approximately in line with a share in the number of the population in the world) and ranged between 8.3% (1926–1950) and 16.2% (1951–1975). With a certain convention it may be said that Europe (including Russia) was the epicenter of historical activity in the industrial period, 71% of the most protuberant facts fell to it. However, it might be expected that in the prospect of the 21<sup>st</sup> c.

proportions will change in the post-industrial society, historical activity of the East will intensify significantly.

### **17.3. Civilizational Dynamics in the Mirror of the Strategic Matrix**

Another example of a cliometric inquiry into the dynamics of civilizations is the measurement of dynamics of civilizations made on the basis of a strategic matrix by the Institute for Economic Strategies under the lead of **B.N. Kuzyk** and **A.I. Ageyev**. The methodology of such measurements was worked out and the measurements were made taken Russia as an example [100,101] and a number of civilizations of the East (*ch. 19*).

**The strategic matrix is a major element of the theory of strategic management which we understand as a special class of management processes associated with a transit state in life of social systems, with processes of their conscious and self-organized transition to qualitatively new states.**

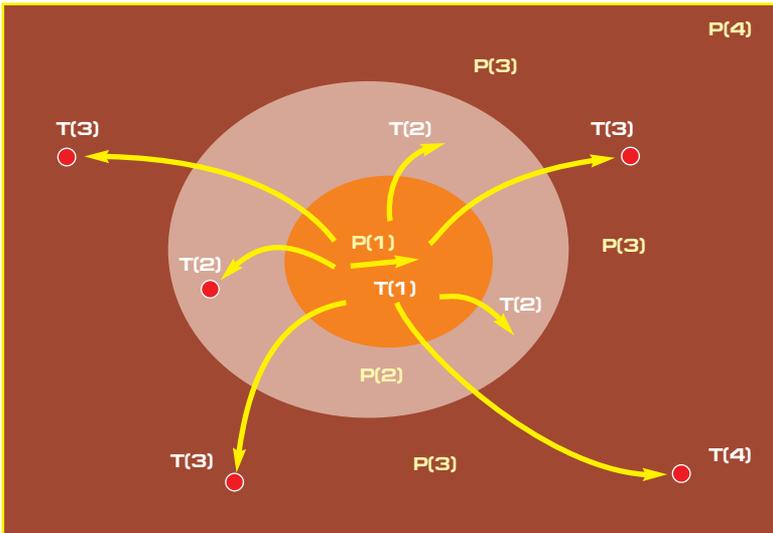
In practice strategic management manifests itself in the activity of individuals, all major social institutions, including the state, in unceasing attempts to bring the objectives of their activity into conformity with the opportunities and threats of the environment, and also their own ideas about the objectives of social structure, spiritual mission of the people. Efficiency of such attempts, their consistency with internal regularities of the system and environment is another issue.

A theory of strategic management may became for people responsible for making strategic decisions a method of structurization of their ideas both about the states of managed systems and «corridors» of their variability, and practical approaches to the working out and pursuance of strategies. This method may be represented as a matrix or an aggregate of variables which makes a part (element) of the historical matrix mentioned above, one of its nested structures.

The key notions describing the process of strategic management are the states of the system and trajectories of a transition from one state to another.

The states of the system bear traces of all its history – its inborn and gained properties adjusted during development by numerous attempts to adapt to the requirements of the environment, to their

Figure 17.1  
**States and Trajectories**



own setting of aims (successful or not) and to their own needs of evolution. On their part restrictions of evolution of states are formed by external and internal factors of development. External factors (political, economic, social, technological variables) originate from the environment around the system, internal – reflect tangible and intangible specifics of vital activity gained by it.

In a temporal aspect, all states of a socio-natural system are reduced to four kinds (*fig. 17.1*). Zone  $P(1)$  is a current state where the main thing (with respect to our object being studied) is the size of territory, number of population, power consumption, management system and nature of external relations.  $P(2)$  is an area of actually possible, practicably reachable states which represent intensification (increase) of the said characteristics.  $P(3)$  is a field of the states imaginable, but under given conditions – unreachable.  $P(4)$  is a field of the states which are outside the horizons of our imagination.

A change of states occurs as a result of a complicate, non-linear interaction of external and internal variables. Strategic decisions determine the trajectory of a transition from one state of a managed system to another, restrictions influence time and range of such transitions.

Depending on the category of initial and further states four types of trajectories may be distinguished:

- ➡ existing within framework of the state of the system formed and describing actually practicable transitions under a given state of the system;

- ➡ representing attempts of a breakthrough in rationally unreachable states;

- ➡ trajectories of a searching nature, which are able to lead to the way-out from the state which was beyond imagination before.

This class of situations is connected with phase transitions to evolutions of systems, bifurcation points making possible the implementation of scenarios which appeared originally unreal. In such situations non-trivial solutions have an exclusive significance – a wonder as a factor of strategy, logic of impossible. There are a lot of examples of a practical implementation of such strategies in the history.

The choice of a trajectory of evolution of a system is a key problem of strategic management. On the level of practical policy the choice of trajectory of development of system manifests itself either in revolutionary events or in these or those reforms of the former management system. But in any case the matter in question is obvious changes in behavior of managing structures. As a matter of fact a choice of trajectory determines the attractor of the system – a certain segment of phase space **P(2)**, **P(3)**, **P(4)** – as an aggregate of desirable models of behavior and parameters of the system. The difficulty of such choice is predetermined by several factors:

- ➡ continuity (accumulation nature) of changes inside and outside the system;

- ➡ information deficiency;

- ➡ multiplicity of objectives, groups of interests, their mutual expectations and reactions;

- ➡ cognitive, psychological, organizational, social and political restrictions of behavior of the leaders;

- ➡ extent of their tendency to risk, passionarity, readiness and ability to see and solve large-scale problems.

Strategic decisions are aimed at the transfer of the system to a qualitatively new state. Characteristic features of such decisions include irreversibility of their long-term consequences. The implementation of a specific decision makes a return to the previous state either impossible or requiring an unacceptably large spending of time, resources and efforts. Both internal and external parameters

of the system may be the object of strategic decisions, but their base is always preferences of the people making such decisions, their awareness of interests of the groups of influence and possible benefits – tangible or ideological, true or false etc.

For a more demonstrative representation of a kind of strategies implemented throughout centuries we've formed a multi-factor model (enneagram) of a most significant object of strategic decisions (*fig. 17.2*).

For our purposes – solution of the issues of dynamic topography of the system – the enneagram was modified. Out of many circumstances influencing the dynamics of historical process the most representative nine have been taken.

We've conducted a thorough analysis of mutual relations and influence of all the said factors. As a result nine most significant for the dynamics of the development of a state factors have been selected.

- 1. Management**
- 2. Territory**
- 3. Natural Resources**
- 4. Population**
- 5. Economy**
- 6. Culture and religion**
- 7. Science and education**
- 8. Army (armed forces)**
- 9. Foreign policy (geopolitical environment)**

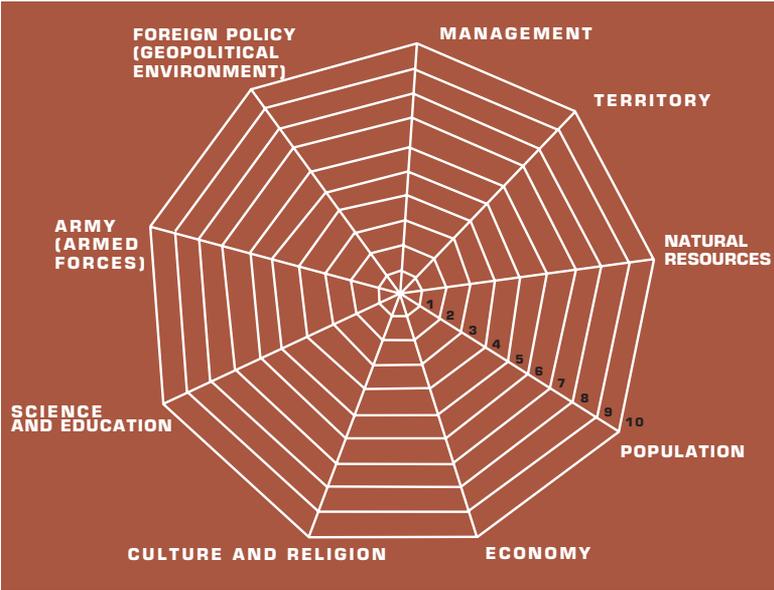
The identification of historical values of such factors was performed based on Delphi judgments using successive approximation technique.

Each of the parameters is viewed by us in accordance with inexplicit four figure topological scale, whose numerical values are within 1 to 10, which enables the experts to vary the valuations inside major classes (*table 17.4*).

In the enneagram that is a graphical expression of potential or kinetic energy the factors that ensure its potential of development and its implementation are distinguished. Accordingly, the first includes territory, natural resources, population, culture and religion; the second – economy, science, army and foreign policy. We view the management as a factor synthesizing all these elements.

An increase or decrease of the size of a matrix profile is a sign of directivity of an aggregate vector of evolution either for creation or destruction of the system.

Figure 17.2  
**Enneagram of Strategis Factors**



Let's consider interpretation of separate parameters under the given scale.

«**Management**» is a general function of a social system ensuring the preservation of its certain structure, maintenance of the mode of activity, implementation of programs and objectives. Foreknowledge of the future, systematic nature of applied forces and means, certain validity of decisions, choice of criteria and system of control over the performance of tasks are inherent to the function of management in ideal. In the context in which such function is viewed in our work it is possible to speak about the state management, i.e. about the regulation of social relations inside the state and relations with an outside world. Such regulation is performed in a public way through the power of a state. Strategic management is a special kind of a managerial function aimed at the transformation of a social system, decision of non-trivial problems in society's life.

Discussing the implementation of the management function throughout the Russian history we refer not so much to specific forms of the implementation of state power (absolutism, totalitari-

anism or democracy), but assess the level of adequacy of the state management to those tasks that the country objectively faced in a specific historical period. As not only adequate (modern and advisable) responses exist in reality, but also inadequate (untimely, incorrect etc) ones. Furthermore, depending on the quality of the understanding of historical challenges by the leaders pseudo-challenges and pseudo-responses may arise.

It should be noted that it is exactly absolute management that was typical of a larger part of the Russian history that is explained in many ways by aggressiveness of the environment. This thesis may be illustrated by numerous examples from contemporary history when under conditions of the oncoming total war even countries of the so-called traditional democracy made serious deviations from the pursuance of democratic principles.

Thus, for instance, sharp turns occurred in the Russian history when **Peter I, Catherine II** took the thrown, whose reign fostered the growth of power and influence of the Russian state. But there were also periods of **Boris Godunov, Paul I, Peter III**, and in contemporary history – **M.S. Gorbachev** when managerial errors of the rulers led to internal destabilization of the state, contributed to worsening of its international position or even instigated crisis putting Russia on the brink of a loss of statehood.

One of essential characteristic of the function of management is that it connects all other factors of development of the state with each other (economy, policy etc) and it is able to provoke sharp changes in them.

The definition of the values of «**Territory**» parameter for specific historical periods is based in many ways on the estimation of the proximity to certain images. Thus, if we speak about «super power»

Table 17.4

**Scale of Delphi Judgements**

Status of the State	Level (Numerical Value)		
	Below average	Average	Above average
Super power	8	9	10
Great power	5	6	7
Regional power	2	3	4
Small state	1		

term, then only a relatively small number of the states could purport to this status in various historical periods. In the ancient world the Roman Empire may be viewed as a classic example. The Empire of Alexander the Great in the ancient history and the Napoleon Empire in new time at the peak of its might existed relatively short, but they can also serve as a reference to the approximation to the status of a super power. A classic apprehension of this term dates back to the period of World War II when the bipolar system emerged with the USA and the USSR as its poles which had the status of super powers.

The term that determines the status of a state as a great power is also quite recognizable. Historically, it appeared earlier than the term «super power». In various periods the Holy Roman Empire, Portugal, Spain, Great Britain, France, Prussia, Astro-Hungary, etc, were viewed as great powers. In the historical science it is generally accepted that Russia first made claims to the status of a great power in the period of Peter I. However, the ancient Russian state in the period of its supreme might, Muscovy Czardom before the beginning of the Livonian war if compared with neighboring states of Europe and Asia also approached close to the compliance with such notion, especially in a territorial dimension. If only a territorial criterion is taken, then from the time of the Muscovy Czardom after joining Siberia Russia has not descend lower than this status (except a historically short period of the civil war of 1918–1920).

The term «regional power» was coined relatively not long ago – in the contemporary history. In our classification this term (including in a territorial interpretation) means a state significant in a regional scale, but ranking below the scale of a great power.

The term «small state» is applicable to the countries whose significance and territory are small even in a regional dimension.

The definition of the status of a state by «**Natural resources**» parameter is one of the most difficult moments. First, it is connected with a change in the economic structure of life in various historical periods, and consequently natural resources underlying economy in this or that moment. Second, the influence of such factors as geographical location, climate etc is also important. Along with that «**Natural resources**» parameter differs from the criterion «**Territory**». It is not less significant that the more far-off historical period we discuss to the less degree we may rest on strict statistical calculations and the estimates have a more «taste» of emotionality and ethnography nature. On this basis the assessment by «**Natural**

**resources»** parameter is more dependent on subjective apprehension of experts assessing the endowment of the state with natural resources.

Restrictions existing for **«Natural resources»** parameter may be extended nearly in full to **«Population»** parameter. Besides, the factor of eurocentricity of the history known to us renders a significant effect on our assessments by this parameter (before the period of great geographical discoveries). On this basis the guides for the work of experts in their estimations based on **«Population»** parameter were its values typical of new time and as if «thrown over» to earlier historical periods.

Thus the lower threshold of the population number for a modern super power makes the order of 300 mln. people. Only India and China exceed it. The USA and united Europe come close to it. The USSR was close to this level.

The status of a great power implies that the population of the country makes 120–300 mln. people. The population of Russia, Japan, Indonesia, Brasilia, Pakistan and Bangladesh is within this range. Along with that traditionally great powers – Germany (82 mln.), France (58 mln.), Great Britain (55 mln.) – fall out of this list. A great European project – European Union – may be viewed as the union of powers from this viewpoint, each of which independently (including by demographic indicators) is unable any more to play its traditional role in the world arena and has to seek ways to keep its influence through integration with the partners economically and culturally close to it.

This indicator makes 30–120 mln. people for a regional power. Egypt (68 mln.), Iran (66 mln. people) may serve as an example of regional powers.

The definition of the significance of the state in the world system by **«Economy»** parameter does not present any special difficulty now. The key aspects are well-known: GDP, GDP per capita, gold and foreign exchange reserves, public debt etc. However, if we go deep into the history, the identification of these indicators say for ancient Rome or ancient Greece, Byzantium or Rus appears impossible. Therefore other parameters for the assessment of economic might of a state are suggested in this work.

In order to achieve more exact tuning of measurement by indicators of an economic potential, we've singled out **«Quality of Life»** – one of the most complicated parameters for a retrospect analysis. Nevertheless, on the expert level we can in actual fact compare a rel-

ative quality of life of population of ancient Russian state and Byzantium, agricultural Russia and nomadic steppe tribes. It is characteristic that the size of this parameter in the Russian history as a rule turns out to be lower than the values of other factors. It is corroborated by a known observation on a traditionally low quality of life of the country spending considerable efforts to ensure its security, neutralize unfavorable climate conditions.

The development of culture, and also religion is singled out as a separate factor **«Culture and Religion»**. Being aware of risk of such computation we, nevertheless, have made an attempt to measure their dynamics being aware of exclusive importance of religion and culture in general in people's life. In this we follow a tradition of the Russian historical science, which distinguishes customs, manners and religion as an object of study.

The last is particularly important as secularization of social life occurred only in the 20<sup>th</sup> century; church was separated from the state nearly everywhere in the world.

**«Science and education»** parameter is hard to formalize so that to permit to assess the level of development of the state by this indicator throughout a long historical period. At the same time we are able to match up the level, for instance, of development of crafts in the Ancient Russian state and Western Europe, time when printing appeared, beginning of manufacturing of separate types of weapons. At the end of the 19<sup>th</sup>–20<sup>th</sup> century Russia (USSR) succeeded in taking advanced positions in science in a whole number of directions. By the end of the 20<sup>th</sup> century the country had progressive scientific schools nearly in all range of modern knowledge.

The **«Army»** parameter is applied to determine the level of development of a force component of the state for various historical periods. If we consider a modern situation, then the level of development, for instance, correspondent to the term **«super power»**, may be determined something by the following indicators:

- ➡ manufacturing of absolute majority of the systems of weapons and military equipment;
- ➡ availability of nuclear weapons, ocean-spanning rockets under a total number of nuclear warheads at least 1 000–1 500 units;
- ➡ number of armed forces more than 2 mln. people;
- ➡ equipment with advanced systems of control and communication.

Only the USA corresponds to this level in full now. Russia is close to this level for the time being, but an essential lagging is taking shape by such indicators as manufacturing of weapons in all range of modern systems, number of armed forces and equipment with advanced systems of control and communication.

It is typical of a great power to have a smaller number of operational nuclear warheads (about 100–500 units), a certain lagging in the development of systems of control and communication from a super power. In such countries, national manufacturing of certain critically significant systems of armaments may not be organized (for instance, strategic bomber aircraft, airborne early warning aircraft and control, modern air capable ships, submarines with nuclear propulsion system, combatant vessels of other major classes etc.).

A military regional power as a rule has no nuclear weapons and lags essentially in the development of systems of control and communication, a major part of armaments is imported.

We may evaluate, for instance, the army of the period of the rise of the Roman Empire, military organization of the Huns, and the army of the Golden Horde similar to such ideas.

The specifics of definition of «**Foreign Policy**» parameter are that it is connected with the quality of management to a greater extent than others. Actually, the matter in question is one of the components of the management. Along with that making this parameter an independent indicator is important in terms of harmonious development of all elements of the might of the state. As an example the 70s years of the 20<sup>th</sup> century may be taken which not only national, but international experts deem a «golden» decade of the Soviet diplomacy. In these years the US aggression upon Viet Nam was a complete washout, a negotiation process between the USSR and the US in strategic weapons began, the USSR expanded its influence in the countries of the third world etc. Along with that the tasks of ensuring a military parity with the USA and increase of political influence in the world were fulfilled at the cost of structural disproportions in the development of economy of the USSR. The result was an essential lagging of the growth rates of quality of life of population in the USSR not only from the countries of the West, but from the allies of the Socialist camp that led to the undermining of a moral authority of the country. Unequal distribution of efforts in various sectors of national economy contributed to the development of a system crisis and speeded up the disintegration of the former powerful state.

As a geopolitical «weight» of the state is assessed through its own status and the state of its environment, several indicators have been introduced to assess a geopolitical status of Russia and dynamics of change of the latter against the background of historical events being discussed. The first, own geopolitical «weight» of Russia is determined as a mean value of indicators by nine major parameters determined above. The integral indicator of Russia's might is considered in two values for the assessment of dynamics of its geopolitical status:

$R_1$  – integral indicator of Russia's might before a historical event;

$R_2$  – integral indicator of Russia's might after a historical event.

For the assessment of the state of a geopolitical environment of Russia the following indicators are used:

$S_i$  – status of country  $i$ ;

$K_i$  – level of conflict in relations of state  $i$  and Russia.

The introduction of indicators  $S_i$  and  $K_i$  permit to estimate a geopolitical environment of Russia through the relation between «allies/adversaries» as:

$(\sum_{i=1, n} S_i * K_i$  – total value of «allies/adversaries» before a historical event;

$\sum_{i=1, n} S_i * K_i$  – total value of «allies/adversaries» after a historical event..

As the ratio between «allies/adversaries» shows, on the one hand, an essential influence on a geopolitical status of the state, and, on the other, it is a derivative of such status in many ways, the formula of a total geopolitical potential of Russia, inclusive of both changes in the value of an integral indicator of its might, and the relation between «allies/adversaries» was made empirically.

$$Ru = [R2 + R2 * (\sum_{i=1, n} S_i * K_i - \sum_{i=1, n} S_i * K_i)] / R_1 * 100$$

And the priority in the formation of the value of an aggregate geopolitical potential is given to an integral indicator of Russia's might as a most stable.

## **17.4. Long and Super Long Waves of the Russian History**

The inquiries that have been made clearly reveal a cyclical nature of historical dynamics of Russia by all 9 factors of the strategic matrix.

As the matrices of the 80-year cycles consistently show, **a long-term vector of Russia's development is a posteriori directed at the increase of a total potential of social energetics despite regularly repeated rolls back to lower values by major parameters.** At that, some factors reveal a relatively smaller, and other – relatively larger amplitude of its dynamics. The first ones include territory, natural resources, the second – foreign policy, noticeably weakening in the periods of crises, and the management factor dependent on subjective features of leadership and efficiency of the state system.

The analysis shows that deviations of the size of an aggregate geopolitical potential of the level of an integral indicator of might of the state throughout the period discussed (862 A.D. – 2004 A.D.) had a short-term (in terms of history) nature, which in general is predetermined by the technique of their estimation. Along with that, an interesting fact may be noted that a change in the value of the indicator of an aggregate geopolitical potential as a rule also preceded the relevant adjustment of an integral indicator of might of the state (toward decrease or increase respectively).

Having risen for the first time above the level of an ordinary regional power already in the first historical cycle of its development, Russia downed below the level of a great power only in the periods of a long-term (a disintegration of ancient Russian state and the Horde Yoke followed thereafter) or short-term loss of the statehood (Troublous Time, October Revolution and Civil War, disintegration of the USSR). The restoration of a capable state power predetermined the return of Rus/Russia to the ranks of great powers (in terms of transformation of this notion for various historical periods).

Along with that, although Russia approached a lower level of the status of a super power in the 80-year historical cycle of the period of development of the USSR, unfavorable geopolitical environment

and insufficient harmonious development of the components making the might of the state predetermined a disintegration of the USSR in many ways. This led not only to a loss of a super power status by Russia, but also to a decline in the integral indicator of its might below the level of a great power, which as we've already addressed above is typical of the periods of a temporary loss of statehood.

This finding is also confirmed by analysis of the change of «**Management**» factor with respect to which an absolutely well-defined correlation with the change of values of an aggregate geopolitical potential is traced.

Rus/Russia exceeded the level of a regional power by «**Territory**» indicator already in the period when the ancient Russian state existed. A period after disintegration of the Kievan Russia and the Horde Yoke following thereafter led to a drop of this indicator as split Russian Principalities of that period did not make a single territory.

Liberation from the Horde Yoke and the rise of the Muscovy Principality, which became a gatherer of the Russian lands, predetermined the return of Rus to the ranks of great powers (by «**Territory**» indicator).

The joining of Siberia, even despite considerable territorial losses in the period of the Troublous Time (territorial concessions to Poland and Sweden on the Baltic and Northwest) contributed to an essential expansion of the Russian state.

A strong impulse that gave a stimulus to the growth of Russia's might, including a territorial dimension fell to the period of Peter's wars. Russia made further territorial acquisitions throughout the 17<sup>th</sup>, 18<sup>th</sup> and the 19<sup>th</sup> centuries that contributed to stabilization of «**Territory**» indicator on the level of a super power.

In the 20<sup>th</sup> century, after it suffered at beginning of the century a short period, in terms of history, of a loss of statehood (a period of the Civil War), Russia succeeded in restoring control over a larger part of the territory of the former Russian Empire by the second quarter of the century within a new state formation – the USSR.

In the period before the Great Patriotic War (World War II) and immediately thereafter the USSR did not only restore control over a number of territories of the former Russian Empire, but it managed to form its own sphere of geopolitical influence in Eastern Europe, and further in Asia, Africa and South America. It is exactly why a peak of territorial expansion of Russia fell to this period.

A disintegration of the USSR led to a loss of ample territories by Russia, which once made a part of a single Russian Empire. For the first time from Peter's time (beginning of the 17<sup>th</sup> century) Russia descended below the level of a super power by «**Territory**» indicator. This requires certain explanations as even in the down-sized form the Russian Federation is the largest country of the world by its territory.

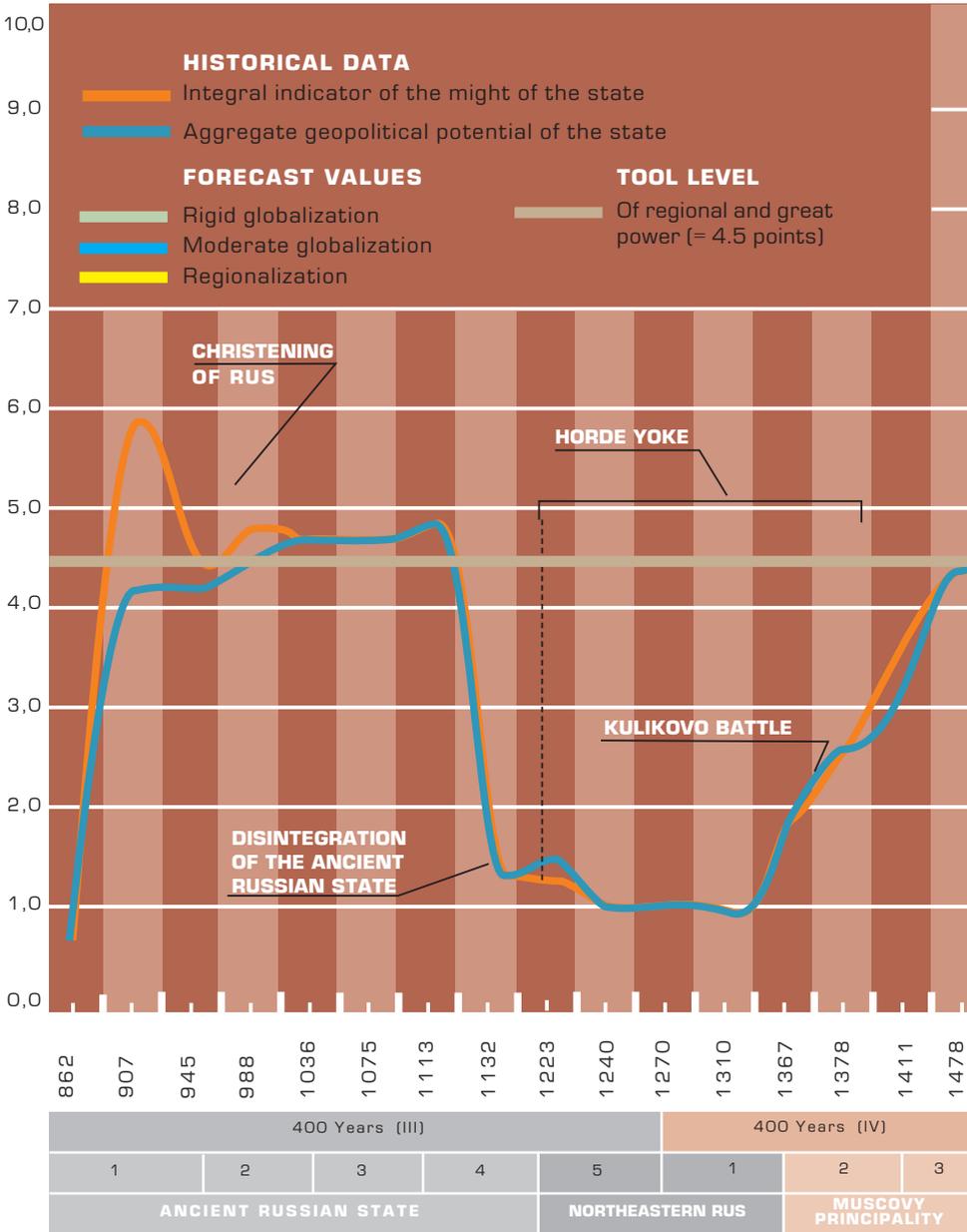
However, the territory occupied by Russia is low developed in its considerable part due to complicate natural conditions of the Extreme North and Siberian taiga. Moreover, a super power status implies an indirect control over the territories owned by amicable and allied states. At the end of the 20<sup>th</sup> and at the beginning of the 21<sup>st</sup> century Russia practically lost allied relations not only in the traditional spheres of influence of the USSR, but it failed to strengthen the relations with many former Soviet republics on the level of allies. As a result geopolitical environment of Russia has a nature of a competitive environment in many ways, and often act from hostile positions to it.

The estimation of the endowment with «**Natural resources**» shows that a larger part of the period of the existence of the country this indicator was in line with the overall level of development of the state or even exceeded it. And the endowment with natural resources was even of a more stable nature in comparison with many other parameters and the integral indicator of an aggregate geopolitical potential. Drastic changes of this indicator are mainly connected with transitional stages in Russia's history which were characterized by a threat of a loss of its statehood. And a natural correlation of the endowment indicator with natural resources and territorial acquisitions which were made by Russia and its territorial losses is observed. And specifically, the last essential drop of this indicator is connected with the disintegration of the USSR.

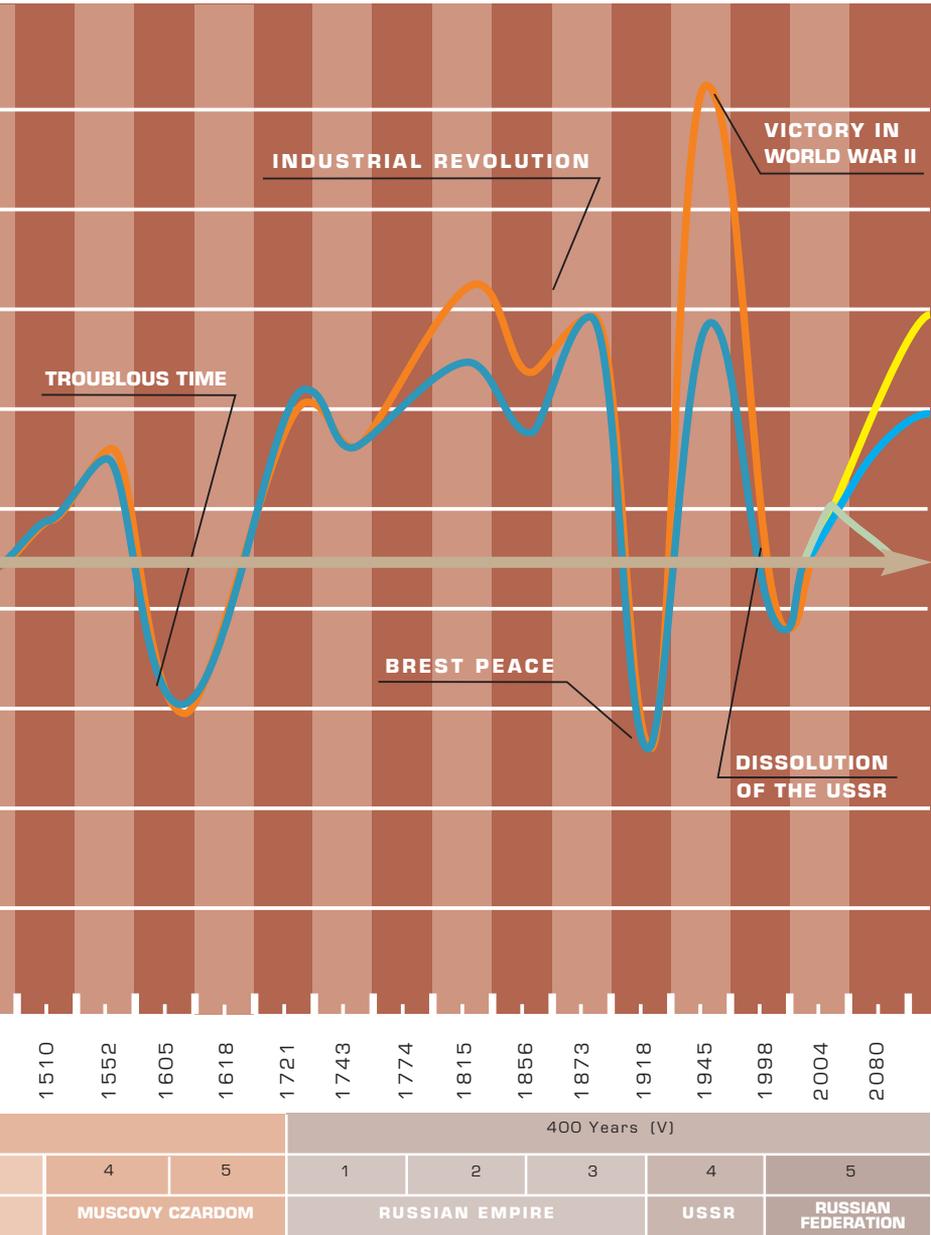
«**Population**» indicator was one of the most stable throughout all Russian history. Rus/Russia dropped below the level of a great power by this indicator only in the periods of the disintegration of the ancient Russian state and the Horde Yoke, and also the Troublous Time. However, from the beginning of the 20<sup>th</sup> century historical upheavals connected with World War I and Civil War followed thereafter, and then World War II caused considerable losses to Russia by this indicator. A disintegration of the USSR and a tendency to depopulation brought Russia near to the boundary level between a great and regional powers. A further transformation

Figure 17.3

**Change in the Integral Indicator of Might**



of the Russian State



of this indicator will be one of the determining moments of Russia's choice of its further path of development.

«**Economy**» indicator correlates to a greater extent than other indicators introduced by us with the indicator of a geopolitical potential of the state. Along with that it should be noted that for the last 400 years this indicator nearly always (maybe except a historically short period of the end of the 50s—beginning of the 70s of the elapsed century) yielded to the indicator of an aggregate geopolitical potential of the country.

The specifics of behavior of «**Culture and religion**» indicator are that it is to a less extent correlated with an aggregate indicator of political might of the state. It might be partially connected with a contradictory structure of the indicator itself as while the development of culture and religious development are dependent on each other, they are far from being identical. Therefore both positive and negative peaks in the development of culture and religion may be connected with the development of one of its components and level the other. A major peak of the development of culture and religion fell to the second half of the 19<sup>th</sup> century in the history of Russia. It is exactly this period that is called the «Golden Age» of the Russian literature, fine and other types of art reached their heights in that period. In this period Russia gave to the world outstanding writers, artists and composers, theatrical art developed vigorously. At the same time this period is also characterized by a high level of the development of a religious component. In the period after the civil war the indicator «**Culture and religion**» developed not so successfully due to the fact that a religious component was in stagnation under quite high achievements in the sphere of culture in the 20<sup>th</sup> century.

Dynamics of «**Science and education**» indicator development indicates that in general the level of their development was in line with an overall level of development of the country throughout the Russian history. Along with that, the sharp rise of the development of this indicator are observed in some periods (Peter's modernization, a period of industrial revolution, and also throughout nearly all period of the existence of the USSR).

«**Army**» indicator is one of the most unstable in the history of Russia. It is explained by the fact that throughout human history military modernization outpaced as a rule the general development and often acted as its catalyst. At the same time military modernization is quite dependable on the state of economy, development of

the system of state management, level of development of science and education. Thus, Peter's modernization of the country was dictated in many ways by the necessity to solve complicated military tasks, which would ensure a further survival of the state. The major tasks of that period included ensuring of security on the southern boundaries of the state, leveling of military opportunities with Sweden which pursued increasingly aggressive policy on the northwestern boundaries of Russia, ensuring of the outlet to the sea communication of the Baltic, Black and Mediterranean Seas for Russia. The defeat in the Crimean War (1853–1856) is on the contrary a vivid example of a lagging military modernization when Russia which used to be one of the influential states in Europe in the recent past after the victory of Napoleon suffered a humiliating military defeat from a coalition of the European states.

Quite foreseeable changes of the value of «**Foreign policy**» indicator, which is determinative in many ways for the formation of the ratio between «allies/adversaries», actually precede the relevant changes in an aggregate geopolitical potential of the state. This indicator in its ups and downs repeats to a great extent also the dynamics of change of «**Management**» indicator as it is one of the key elements of management of the state.

The most significant result of our observations and computations is probably the fact that a roll-back of the integral might of the Russian society to the lowest values occurs once in 380–400 years. Also imminent rises in the integral might of the country practically by all parameters inside these 400-year intervals is a specific feature. The boundaries between 400-year periods differ from each other by «troubled times». It was so both in the middle of the 9<sup>th</sup> and 13<sup>th</sup> centuries and in the first half of the 17<sup>th</sup> century; something similar occurs with Russia nowadays. Each cycle has its periods of «dark centuries», «middle ages», «classics», «troubles» and its peak. With an enviable regularity each empire that reached the might declines, and all begins anew.

Approximately 400-year cycles of development, which are observed in the Russian and world history and which we call super long, have a quite harmoniously expressed nature, fuller and more complete by their contents than the so called long cycles (waves), which last approximately 80 years. Clearly defined 80-year cycles – from the rise to the fall – occur relatively seldom. 80-year cycles with a unidirectional trajectory from the fall to the rise and vice versa either with tonal (positive or negative) internal contents

occur more often in the history of the country. Taking as zero – tool – level of integral might 4.5 points (a status of developed regional state) we may easily identify 80-year fluctuations both above a zero level and under it.

It is important to understand that a 80-year period of the Russian history occurs regularly and is the shortest cycle at the same time, bearing completed contents of most varied quality at times – social, cultural, military, industrial etc. And events that make the points of both the highest achievements of the period, and the greatest dramas may be observed in each cycle (*fig.17.3*).

Let's look from this viewpoint at the historical dynamics of expansion of Russia for the last eight cycles of life of the country (*table 17.5*).

A comparison of historical data given in the table with a model of social turbulence may be viewed as completely satisfactory. And really the strongest impulses of spatial expansion of the country occur in the first half of the cycle closer to its first third.

And theoretical estimations and historical data indicate that a long cycle of the Russian development has at least two approximately equal phases of 40 year duration each. Furthermore, due to its natural harmonic nature a long cycle of development may be divided not only in halves, but quarters,  $1/8^{\text{th}}$  and  $1/16^{\text{th}}$  of its parts. In case of Russia, it means the option to identify 40-, 20-, 10- and 5-year runs in the rhythms of life of the country. In a general case, the rhythms in the history of the country various in their duration were connected with the events in social life and varied in quality. A possible explanation of this phenomenon is connected with an uneven distribution of energetics of society by its various phases and proportionality (in a general case) of scale of social shifts to the duration of intervals of development.

Thus, the first half of the first 40-year phase (duration up to 20 years) is characterized by minimum energy of social life under its fast growth. Therefore it is natural to suppose a connection of this phase with crisis phenomena in the country. However, after this phase in the second part of a semi-cycle when energetics of society reaches its maximum a vigorous physical, scientific, cultural and industrial growth, which is completed with the achievement of the heights of industrial and cultural development of its time, is usually observed.

In its turn the second 40-year phase is subdivided into approximately a 20-year period of conservation of the achieved level of life

Таблица 17.5

**Historical dynamics of Russia's expansion in the last eight cycles of country's life**

Beginning of historical period		Top of historical cycle		Time span
Year	Event	Year	Event	Year of cycle/ part in %
1359	Beginning of the reign of Dmitry Donskoy	1380	Kulikovo Battle	21 year/ 25%
1439	Middle of «Large Internecine War»	1471–1480	Joining Novgorod, end of the Horde Yoke	32–41 year/ 40–50%
1519	Middle of the reign of Vassily III («Dark»)	1552	Joining Kazan	33 years/ 40%
1598	Death of Fedor Ioanovich	1629	Foundation of Krasnoyarsk	31 year/40%
1676	Death of Alexander Mikhailovich	1704	Foundation of Petropavlovsk-Kamchatsky	28 years/35%
1756	Beginning of the Seven Years' War	1784	Settlement of Shelekhov in America, mastering of Alaska	28 years/35%
1837	Reform of state peasants	1864	Beginning of the conquest of Central Asia, sale of Alaska	27 years/35%
1917	October revolution	1945–1957	Victory over fascist Germany - expansion of the boundaries of the USSR. Formation of socialist camp. Exit into space	28–40 years/ 35–50%

(in the last cycle this period is from the middle of 1960s to the middle of 1980s) due to a fall in social activity and approximately the same by duration period of dramatic remaking of social life objectively preparing a new long cycle of development.

Besides four major phases a long cycle is divided into a series of shorter rhythms, including minimum social chronons of five years found empirically in the USSR. From the viewpoint of our natural-scientific ideas about a dynamical phenomenon of the Russian society, they were quite validly taken for units of a socio-economic planning in due time.

10-year intervals of social life of the country manifested themselves most demonstratively in its catastrophic cataclysms. In this connection it is enough to recall a 10-year period of the Troublous Time at the beginning of the 17<sup>th</sup> century or a decade of economic

recession in 1989–1998. Distinctive features of decades may also be observed quite clear-cut in the post-Peter time of «palace manoeuvres» and in the Soviet period.

However, the inquiries into an internal structure of a country's life cycle show that it is not reduced to physical (dynamical) phenomena. In social life like in physical systems only transformation of one type of energy into another occurs, for instance, kinetic into potential. But if we've learnt to measure somehow physical energy of society, then its other components, from a viewpoint of exact sciences, are only still hypothetical (or qualitative), and not quantitative measures of development of society. And nevertheless, long-wave changes may also be found in economic, foreign policy and managerial and cultural life (nearly by all factors of the matrix). Interesting correlations may also be observed between processes of a various nature. Thus, declines in social activity, spatial compressions as a rule, precede rises in cultural life. It may be called a kind of law of conservation and transformation of social energy.

In all life cycles of a country considered in addition to clear-cut large political and socio-economic heights in the first phase of a cycle we may also identify one-two larger outbursts of scientific achievements at the beginning and at the end of a cycle. For instance, a post-revolutionary rise of scientific activity in 1920–1930 and a breakthrough in the scientific-technical sphere in 1940–1950 were such outbursts in the 20<sup>th</sup> century in Russia.

Knowledge of a wave-like nature of social life is a tool of great significance of its exact reading and a base for a possible practical management.

Attention should be paid also to such aspect of energetics of social systems as interaction with external systems. According to modern views any system for its life activity should discharge excess energy to the environment in varied forms. This includes heat emissions into the environment, export of power resources, outflux of capital, material and human resources etc. The system also needs a balancing of external influxes of energy. This peculiar function of a social system connected on the surface with a loss of its energy is nevertheless vitally important for it. A lack or weakness of energy exchange with the outside world is fraught with a double threat: either of a kind of internal «intoxication» or overheating of a system or a threat to be «crushed» due to the influx of energetics in other forms – armed aggressions, political and cultural influence, finance etc Such processes may apparently develop for a long time in a dis-

balanced mode. It may also be assumed that we'll find sufficiently long periods of such asymmetric «yawing» of a social system nearly in all cycles of the Russian history in attempts to acquire a certain balance in relations with the environment. War that changed the frontiers of Russian and other spaces integrated with it are most demonstrative evidence of that. Out of nearly 1200 years of Russia's history a little more than 100 year were peaceful!

It is also interesting to mention the dynamics of a so-called equivalent exchange with the outside world in the Russian history which is traced in the change of the addressee of an economic tribute paid (from the Avar Yoke to the Khazar, Tartar, Polish up to modern forms of «tribute» in the form of the outflux of capital and appropriation of natural rent).

Here are the data on the scale of emigration in the 20<sup>th</sup> century. The first wave (1917–1927) – 4.5–5 mln. people; the second (1941–1945) – 8–10 mln. people; the third (1970–1980) – 11 mln. people; the fourth (from the end of the 80s to the middle of the 90s) – 2 mln. people. Totally for the 20<sup>th</sup> century – 25.5–27 mln. people. In the 90s, admittedly, there was a reverse process – emigration to Russia from the countries of the former USSR.

Social systems have to take care of the existence of external runs-off for its social energetics in one of the above referred forms. From general system, and more definitely – physical viewpoints this mechanism was the reason making the leading European countries conquer colonies in Africa, Asia and South America. Today it is the main source of a global instability, which gives rise to as if new «empty» socio-economic spaces which arise either due to physical destructions (Chechnya, Iraq, Afghanistan and Yugoslavia) or through financial catastrophes (Southeastern Asia and Latin America).

The existence from this viewpoint of an external «empty» reservoir of social energy is a specific stimulator to social development.

Within a natural-scientific model of socium large scales of social runs-off should comply with a greater stability and hence the duration of life of a social system.

**Thus, a most vivid feature is 400-year periods throughout the Russian history for two millennia, each of which includes five 80-year periods, although the latter may be characterized with a sufficient validity only after the year 862.**

## Chapter 18

# MEASUREMENT OF CIVILIZATIONAL DYNAMICS : GEOCIVILIZATIONAL MATRIX



**P**reparing this work the authors with the help of a group of qualified experts organized measurement of dynamics of local civilizations, comparison of indicators for two millennia and a scenario-based forecast of their development in the 21<sup>st</sup> century. This measurement has been made for the first time and required the elaboration of a new methodology that would unite all historical inquiries performed earlier and based on geocivilizational and reproductive multi-dimensional macro models and strategic matrix. As a result of such integration of methodological approaches *the geocivilizational matrix* used for a quantitative estimation of dynamics of local civilizations of four generations (from the 2<sup>nd</sup> to the 5<sup>th</sup> being formed) and five world civilizations (from the completion of ancient to the establishment of post-industrial) was formed. The methodology and estimation of obtained results are stated below. Of course, it should be taken into account that it is only a basic stage for the application of a new approach to cliometric inquiries. Further it is envisaged to improve the methodology and enlarge the historical framework in the retrospect and the prospect.

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## 18.1. Measurement Methodology of Civilizational Dynamics



In the development of the methodology of cliometric geocivilizational measurements we are based on the following methodological assumptions.

**1. The object of measurement is local civilizations of four generations** – both already past and existing now as a part of the 5<sup>th</sup> generation. The first group includes: Greco-Roman, Persian, Byzantine, Mongolian and pre-Columbian American local civilizations. 12 local civilizations being formed at the turn of the 21<sup>st</sup> c. are taken as a basis for classification of modern and prospective civilizations.

The following grouping of *local civilizations* is used:

➡ *European civilizations* – Greco-Roman, Byzantine, Western European, Eastern European, Eastern Slavic (Russian and Eurasian);

➡ *civilizations of East and Africa* – Chinese, Indian, Japanese, Buddhist, Moslem, African (south to the Sahara), and disappeared Mongolian and Persian;

➡ *civilizations of America and Oceania* – ancient American (Meso-America, territory of the Andes), modern daughter with respect to western European civilizations – North American, Latin American and Oceania.

In the period under inquire (1–2100 A.D.) five *world civilizations* are included (final stage of ancient,

medieval, early industrial, industrial and post-industrial) and three historical super-cycles of the development of the *global civilization* (the end of the 1<sup>st</sup>, 2<sup>nd</sup> and beginning of the 3<sup>rd</sup>).

The research is conducted in a three-dimensional civilizational space – temporal measurement.

**2. Six factors making a genetic nucleus of civilizations make the criteria for the measurement of dynamics and relation of civilizations (see chapter 3) and which are determinative in its fate:**

➡ *demographic* – population number and dynamics rates, its structure, and migration processes;

➡ *natural-ecological* – the natural resources endowment that are necessary for life of people and production; territory, climate conditions, level of environmental pollution, frequency of environmental and technogen catastrophes;

➡ *technological* – technological level of production and quality of products (prevailing technological mode of production, technological order, level of innovative activity and competitiveness of products);

➡ *economic* – GDP output and its dynamics rate, level of economic development (GDP per capita), structure of economy and involvement in the world market;

➡ *socio-political* – social structure, political system, socio-political conflicts (revolutions and wars); power and activity of the state, level of legal regulation etc.;

➡ *spiritual sphere* – a prevailing socio-cultural order, level of development of culture, science and inventive ingenuity; moral state of society (marriages and divorces, level of crime); activity of religious life and its influence on society; ideological mood, system of civilizational values.

**3. Measurement of the level, dynamics and relation of civilizations is based on the Delphi point-based approach.** It is clear that no other methods of measurement and comparison of factors so different in quality and their numerous components can be applied – no common denominator can be found. Admittedly, such Delphi approaches are of a subjective nature – they reflect the level of the competence of an expert, his personal sympathies and antipathies, belonging to this or that generation etc. But don't the indicators used in socio-economic statistics and moreover in economic-mathematical simulation have the same subjective nature, change from time to time? Then the matter is not only in the number of experts engaged in measurements, but in their competence and in possibly greater impersonality.

The applied *methods of measurement* look as follows in a concentrated form. The total of estimation (integral indicator) is taken as 100 points. They are divided by 6 factors. The analysis made allowed to estimate two factors (economic and spiritual sphere) in 20 points, each of the other four (demographic, natural-ecological, technological and socio-political) – in 15 points. This is the highest ultimate estimation; a real one may be lower, including zero (a zero point for any of the factors means a lack of civilization as it is due to incompleteness or disintegration of its genotype). These six factors determine the outlines of a geocivilizational matrix. The sum of factor-assigned points for each period of time forms an integral indicator (it can't exceed 100 points).

A comparison of dynamics of local civilizations by their four groups referred to in item 1 is based on the *arithmetical mean measurer*. If a division is made by a weighted average principle (population, territories or GDP output), then these or those civilizations will get an obvious superiority (by population – Chinese and Indian, by territory – Eurasian, North American and African, by GDP – North American, Western European and Japanese). Therefore such approach is not correct. It is our understanding that all civilizations are equivalent in the historical field, regardless of their population, territory or GDP output.

After all points are given, a consolidated *integral indicator* is estimated by all existing local civilizations (proto-civilizations are not taken into account) for a given period of time. The integral indicator describes the level of development of the world civilization prevailing in this period, and also the given stage of development of the global civilization. A comparison of dynamics by periods allows disclosing the rhythm of cyclical dynamics of world civilizations and historical super-cycles. Consequently, the proposed methodology enables to estimate quantitatively the rhythm of civilizational dynamics in three variants: local, world and global civilizations.

**4. The experts have applied multi-various sources for a quantitative estimation of dynamics of civilizations.** Let's mention only the most important ones:

➡ the inquiry of **A. Maddison** into the issues of historical, demographic and economic statistics by major regions and prime countries for two millennia (number of population increase rates, increase rates and GDP output per capita in comparable prices) [264];

➡ the data published by the RAS Institute of World Economy and International Relations (IMEMO) on dynamics of population, GDP, industrial and agricultural production, foreign trade, structure of economy, level of labor productivity (all in comparable prices) for the 20<sup>th</sup> century by prime countries and continents [133], and also a forecast of development of world economy nearly in the same aspect [130];

➡ demographic reference books annually revised and the UN's forecasts containing quite complete demographic data for a period from 1950 to 2000 and a forecast up to 2050 by 228 countries and territories and by continents [272];

➡ annual UN reports on the development index of human potential, UNESCO reports on the dynamics of education and culture published periodically and, UNEP forecast of environmental situation for 30 years, publications of other international organizations;

➡ overviews of the world economy annually published by the World Bank [271] and other statistical materials;

➡ numerous data containing in the sectoral and problem analyses and long-term forecasts, and also in scientific works.

Consequently, statistical and forecast information on historical dynamics and outlooks of development of civilizations and prime countries is abundant. The matter is in its selection, processing and estimation, in the ability to get reliable and maximum accurate estimations. However, the completeness and reliability of information is less as we go farther into the historical past, which should be taken into account when distributing estimations in distant retrospect.

**5. Periodization of time of measurement thickens as we approach modern times.** Two thousand years of retrospect (our era) are taken for a horizon of measurement and one hundred years in prospect – 21<sup>st</sup> c. The measurement of events in a more faraway retrospect and in prospect is complicated by an insufficiency and incomparability of information.

The 1<sup>st</sup> millennium A.D. is subdivided into four periods (1, 300, 500, 800 and 1000 years). Let's note that in the treatise of **A. Maddison** [264] only two extreme periods are given, we've computed the rest additionally or with the involvement of other sources.

The first half of the 2<sup>nd</sup> millennium is represented by four periods: 1200, 1300, 1400 and 1500 years. Further the frequency of measurement is increased – first one hundred year (1600, 1700

years), then fifty-year temporal sections (1750, 1800 years). In the evaluation of civilizations of the industrial period such division becomes even more fractional (1820, 1850, 1870, 1900, 1913, 1929, 1938, 1950, 1970, 1990 and 2000 years). These data are chosen because of their coincidence with the moments when development of civilizations changes.

The forecast for the first half of the 21<sup>st</sup> c. is given quite detail (2010, 2020, 2030 and 2050 years), for the second half of the century – more extensive (2070, 2100 years).

Such unevenness of distribution of estimations in time is determined also by the speedup of the rhythm of historical changes: while in the ancient society a change of world civilizations and generations of local civilizations occurred once in several millennia, then in the second half of the 2<sup>nd</sup> millennium A.D. – once in several centuries.

Let's consider the results of measurement by three groups of local civilizations (Europe and North of Eurasia; Asia and Africa; America and Oceania), and then derive integral estimations in general by world and global civilization.

## **18.2. Measurement of Civilizational Dynamics of Europe and North of Eurasia**

As it has been referred to above this group of civilizations includes the Greco-Roman civilization of the 2<sup>nd</sup> generation, Byzantine civilization of the 3<sup>rd</sup> generation that have already left the historical scene, and the present civilizations of the 3<sup>rd</sup>, 4<sup>th</sup> and beginning of the 5<sup>th</sup> generations – western European, Eastern European and Eastern Slavic (Eurasian, Russian).

### **18.2.1. Dynamics of Population and GDP**

The data on the dynamics of population and economy of Western and Eastern Europe and North of Eurasia in general, and also prime countries of these regions for two millennia are given in [table 18.1](#).

By the beginning of our era Western Europe was on the average world level: 10.7% of the world's population and 10.8% of the world's GDP. Eastern Europe (4.8% and 1.9% respectively) and

peoples who resided in the territory of the former USSR (3.9% and 1.5%) caught up with it.

In the transition to the medieval civilization Western Europe suffered considerable losses both in population and economy. Even after its certain recovery by 1000 the population of Western Europe made 9.5% of the world (a loss of 1.2 absolute percents), and GDP – 8.7% (a loss of 2.1 absolute per cents). And GDP per capita made 92% of the average world. In Eastern Europe and former USSR (where Eastern Slavic civilization formed) the population number and GDP output increased for that period, and a lagging in GDP per capita from the world level remained on the same level.

During the medieval civilization a share of Western Europe in the population of the world increased by 13.1% in 1500, and relation of GDP per capita increased by 136% worldwide (Italy gained the lead – 194% of the world level). Eastern Europe and Eurasian civilization increased its share in the population and GDP of the world inspite of its losses during the Mongolian inroad.

In the early industrial civilization a share of Western Europe somewhat reduced in the population of the world (12.8% by 1820 – numerous wars told), a share in the world GDP increased by 21.9%. Great Britain and France took the lead by the level of economic development, Eastern Europe and Eurasian civilization developed stably gradually reaching the average world level.

Western Europe made a real breakthrough at the beginning of the industrial period, inspite of the pan-European and world wars. While its share in the population of the world fell considerably (from 14.7% in 1870 to 6.4% in 2001), a share in the world's GDP increased from 23% to 33% in 1913 and 1950, and the average world GDP per capita was outperformed 2.2–3.2 times. In the 20<sup>th</sup> c. Eastern Europe developed at the priority rates and especially the USSR, but as a result of a civilizational crisis of the end of the 20<sup>th</sup> c. its share fell in the world's GDP and reached the level of 1500, and with respect to the average GDP per capita in the world it reached the lowest indicators.

Western Europe suffered a hard period of social transformations in the 1<sup>st</sup> millennia A.D when the population number nearly did not increase (and declined in Italy), and GDP output fell from USD 11.1 to 10.2 bln. (in prices of 1990). However, in the period of the medieval world civilization the population and GDP increase rate considerably speeded up, and in the industrial period it reached its maximum (1950–1973 – 0.71% population increase, 4.79% GDP

Table 18.1

**Dynamics of Population and Economy of Western and Eastern Europe and former USSR**<sup>1</sup>

<b>Countries, Regions</b>		<b>0</b>	<b>1000</b>	<b>1500</b>	<b>1600</b>	<b>1700</b>	<b>1820</b>	<b>1870</b>	<b>1913</b>	<b>1950</b>	<b>1973</b>	<b>2001</b>
<b>Population</b>												
<i>Western Europe</i>												
	a	24,7	25,4	57,3	73,9	81,5	113,0	187,5	261,0	304,9	358,8	391,1
	b	10,7	9,5	13,1	13,3	13,5	12,8	14,7	14,6	12,1	9,2	6,4
	c		0,00	0,16			0,26*	0,69	0,71	0,42	0,71	0,32
France	a	5,0	6,5	15,0	16,5	21,5	31,2	35,4	41,5	41,8	52,2	59,1
	b	2,2	2,4	2,3	3,3	13,5	3,0	3,0	3,0	31,3	1,3	1,0
	c		0,03	0,17			0,23*	0,42	0,18	0,02	0,96	0,48
Germany	a	3,0	3,5	12,0	16,0	15,0	24,9	39,2	65,1	68,4	78,4	78,9
	b	1,1	1,3	2,7	2,9	2,5	2,4	3,1	3,6	2,7	2,0	1,3
	c		0,02	0,25			0,23*	0,91	1,18	0,13	0,63	0,15
Italy	a	7,0	5,0	10,5	13,1	13,3	20,2	27,9	37,2	47,1	54,8	57,8
	b	3,0	1,9	2,4	2,4	2,2	1,9	2,2	2,1	1,9	1,4	0,9
	c		-0,03	0,15			0,2*	0,65	0,68	0,64	0,66	0,19
Great Britain	a	0,6	2,0	3,9	6,2	8,6	21,2	31,4	45,6	50,1	56,2	59,7
	b	0,3	0,7	0,9	1,1	1,4	2,0	2,5	2,5	2,0	1,4	1,0
	c		0,09	0,14			0,53*	0,79	0,87	0,25	0,50	0,32
<i>Eastern Europe</i>												
	a	4,8	6,5	13,5	17,0	18,8	36,5	53,6	79,5	87,6	110,4	120,9
	b	2,1	2,4	3,1	3,0	3,1	3,5	4,2	4,4	3,5	2,8	2,0
	c		0,03	0,15			0,33*	0,77	0,92	0,26	1,01	0,32
<i>former USSR</i>	a	3,9	7,3	16,9	20,7	26,6	54,8	88,7	156,2	179,6	249,7	290,3
	b	1,7	2,7	3,9	3,7	4,4	5,3	7,0	8,7	7,1	6,4	4,7
	c		0,06	0,17			0,37*	0,97	1,33	0,38	1,44	0,54
<b>GDP</b>												
<i>Western Europe</i>												
	d	11,1	10,2	44,2		81,3	160,1	367,6	902,3	1396	4096	7550
	e	10,8	8,7	17,8		19,8	21,9	23,0	33,0	33,0	26,2	25,6
	f						0,40*	1,68	2,11	1,19	4,79	2,21
	j	450	400	771	890	998	1204	1960	3458	4579	11 416	19 256
	h	101	92	136	150	162	181	224	227	217	279	318
France	d		10,9	15,6		19,5	35,5	72,1	144,5	220,5	684,0	1256
	e		4,4	4,7		5,3	5,1	6,5	5,3	4,1	4,3	3,4
	f						1,37*	1,43	1,63	1,15	5,05	2,20
	j			722	841	910	1038	1876	3485	5271	13 104	21 092
	h			128	141	148	170	214	229	250	321	349
Germany	d		8,3	12,7	688	12,6	26,8	72,1	237,3	265,4	944,8	1537
	e		3,3	3,8	122	3,7	3,9	6,5	8,7	5,0	5,9	4,1
	f					791	0,17*	2,00	2,81	0,30	5,68	1,75
	j					133	910	1077	1839	3648	3881	18 677
	h						148	161	210	239	184	309
Italy	d		11,6	14,4		14,6	22,5	41,8	95,5	165,0	582,7	100,1
	e		4,7	4,4		3,9	3,2	3,8	3,5	3,1	3,6	3,0
	f						0,21*	1,24	1,94	1,49	5,64	2,30
	j			1100	1100	1100	117	1499	2564	6502	10 634	19 040
	h			194	185	179	167	171	168	166	260	315
Great Britain	d		2,8	6,0		10,7	36,2	100,2	224,6	347,8	675,9	1202
	e		1,1	1,8		2,9	5,2	9,0	8,2	6,5	4,2	3,2
	f						0,52*	1,91	2,55	2,60	4,51	1,16
	j			714	974	1250	1706	3190	4921	6939	12 025	20 125
	h			126	164	203	256	365	323	329	294	333
<i>Eastern Europe</i>												
	d	1,9	2,6	7,0		9,3	11,4	24,9	50,2	134,8	550,8	728,8
	e	1,9	2,2	2,7		2,8	3,1	3,6	4,5	4,5	3,5	3,4
	f		0,03				0,41*	1,41	2,33	2,33	4,86	1,01
	j	400	400	496	548	606	683	939	1695	2111	4988	6027
	h	92	92	88	92	99	102	107	111	100	122	100
<i>former USSR</i>	d	1,6	2,8	8,5	11,4	16,2	37,5	83,6	232,6	510,2	1413	1343
	e	1,5	2,4	3,4	3,5	4,4	5,4	7,5	8,5	9,6	9,4	3,6
	f		0,06	0,22			0,47*	1,61	2,40	2,15	4,84	0,42
	j	400	400	499	442	610	68	943	1488	2841	6059	4626
	h	90	92	88	93	99	103	108	98	135	148	76

[<sup>1</sup>26, p. 256–263]

\* 1500–1920;

*a* – population, mln. people; *b* – in % of the world; *c* – average annual increase rates of a preceding period, %; *d* – GDP output, USD mln. 1990.; *e* – % of the world GDP; *f* – average annual increase rates of a preceding period; *j* – GDP per capita, USD 1990; *h* – % of the world

increase), where at the first stage Great Britain was in the lead, and in the post-war period – Germany and Italy. However, already in the last quarter of the 20<sup>th</sup> c. the population and GDP increase rates obviously slowed down (population – from 0.71 to 0.32% against the preceding quarter of the century, GDP – from 4.79% to 2.21%). A potential of the industrial world civilization turned out to be mainly exhausted. In the first half of the 21<sup>st</sup> c. the tendency towards depopulation will prevail in Western Europe (especially in Italy and Germany) according to the UN's forecast.

The indicators of Eastern Europe (both by population and by GDP) varied to a lesser extent. However, they worsened considerably in the periods of World War I and II and the last decade of the 20<sup>th</sup> c. The same picture characterized the USSR.

### **18.2.2. Greco-Roman and Byzantine Civilization**

The estimation of dynamics of the Greco-Roman and Byzantine civilizations has given the following results (*table 18.2*).

**The Greco-Roman civilization** of the 2<sup>nd</sup> generation inherited a rich culture of the Cretan-Mycenaean and ancient Egyptian civilizations. It reached its peak of development in the 6<sup>th</sup>–4<sup>th</sup> c. B.C., especially in the spiritual field (the heyday of the Greek science and culture) and policy (the germination of democracy under Pericles). However, already in the 3<sup>rd</sup>–2<sup>nd</sup> c. B.C. a breakthrough potential began to decline, much fewer mighty enterprises were made. Alexandria took the lead first from Athens, and then Rome. The Roman Empire is a time of considerable successes in the state-legal, technological and economic spheres, however, the level of spiritual development is not as high as in Greece, the Roman culture is also secondary in many ways to Greek. The integral estimation fell to 76 points at the beginning of a new era to 62 in 300 and 40 in 400. As a result the united Roman Empire, which became weaker under both internal (struggle of plebs with the nobility), and external (inroads of the Barbarian tribes) factors, ceased to be in 476.

**Byzantium** became a successor to the Greco-Roman civilization. It existed for nearly a millennium, and its bloom fell to the middle of the 1<sup>st</sup> millennium A.D. to the reign of **Justinian I** (486–565, Emperor from 527). Byzantium made a substantial contribution to the treasure-house of all humankind as it pre-

Table 18.2  
**Dynamics of the Greco-Roman  
 and Byzantine Civilizations**

Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
<b>Greco-Roman civilization</b>							
1	11	10	13	17	13	14	78
300	9	9	11	13	10	10	62
400	5	7	8	8	6	6	40
<b>Byzantine civilization</b>							
500	11	12	9	10	10	15	67
800	12	13	11	12	11	16	75
1000	11	11	11	11	9	16	69
1200	9	10	10	10	7	14	60
1300	8	8	8	8	6	11	49
1400	5	7	7	5	4	9	37

served and augmented the cultural heritage of antiquity and exerted every effort for dissemination of Christianity in Ancient Russia and other states. Furthermore, Byzantium redounded to economic development of European and Asian countries as it was a hub of prime importance of the trade routes – Great Silk Road and the road from the Varangians to the Greeks. However, a strategically advantageous position of Byzantium became the cause of its death in many ways – many wanted to get such tasty morsel. Under attacks of Arabs, Slavs and Crusaders Byzantium began to lose its positions, and in 1204 it was invaded by the latter. The Latin Empire emerged on a part of the territory of former Byzantium, but it did not play a previous role in the world arena as well as the Byzantine Empire restored by Emperor **Michael VIII** in 1261. In two centuries in 1453 Constantinople found itself in the hands of the Turks-Seljuks and even lost its name and was renamed Istanbul.

### 18.2.3. Western European Civilization

The Western European civilization formed on the lands of Western and Southern Europe that made a part of the Western

Roman Empire. The establishment of the western European civilization was long and hard, achievements of the Greco-Roman civilization were forgotten for several decades, and many things had to be started from zero. The estimation of dynamics of the western European civilization is given in [table 18.3](#). and in [fig. 18.1](#).

The Western European civilization formed under relatively low indicators: socio-political system and spiritual world – 6 points; economic and demographic – 8 and 9 points. The integral estimation made 45 points only.

In the Middle Ages a steady rise began: at the turn of the 12<sup>th</sup> and 13<sup>th</sup> cc. the integral estimation reached already 64 points. Then the growth rate slowed down, especially in the period of a deep-seated crisis of the 13<sup>th</sup> c. (including a plague epidemic, which burst out in Europe). In the early class period it speeded up again reaching 65 points by 1750. However, a real boom awaited for Western Europe at the first stages of the industrial civilization when the integral estimation reached a record level – 82 points in 1900 (first of all due to a technological factor – 14 points and factor of spiritual sphere – 17 points).

Two world wars had severe consequences for Western Europe and considerably worsened the parameters of its development, especially demographic and natural-ecological; the integral estimation dropped to 63 in 1950, i.e. to the level of 1300 and 1600 (the drop began earlier though as the world economic crisis contributed to it). Western Europe gave the world leadership to the USA. In the post-war period it achieved record GDP increase rates and the integration processes conducted to it, however by the end of the century its development slowed down.

In the 21<sup>st</sup> c. two scenarios of the development of the Western European civilization are possible. If the integration processes of Western Europe bring tangible fruit within the European Union, then it will keep its leading positions in a geocivilizational space (integral estimation – 72–74 points under a deterrent influence of a demographic factor). If the pessimistic scenario prevails, then we might expect the next «decline of the West» – a fall of its integral estimation to 60 points, first of all due to a demographic and natural-ecological factor (climate warming and possible environmental catastrophe – flooding of coastal areas adjusted).

Table 18.3

**Dynamics of the Western Europe Civilization \***

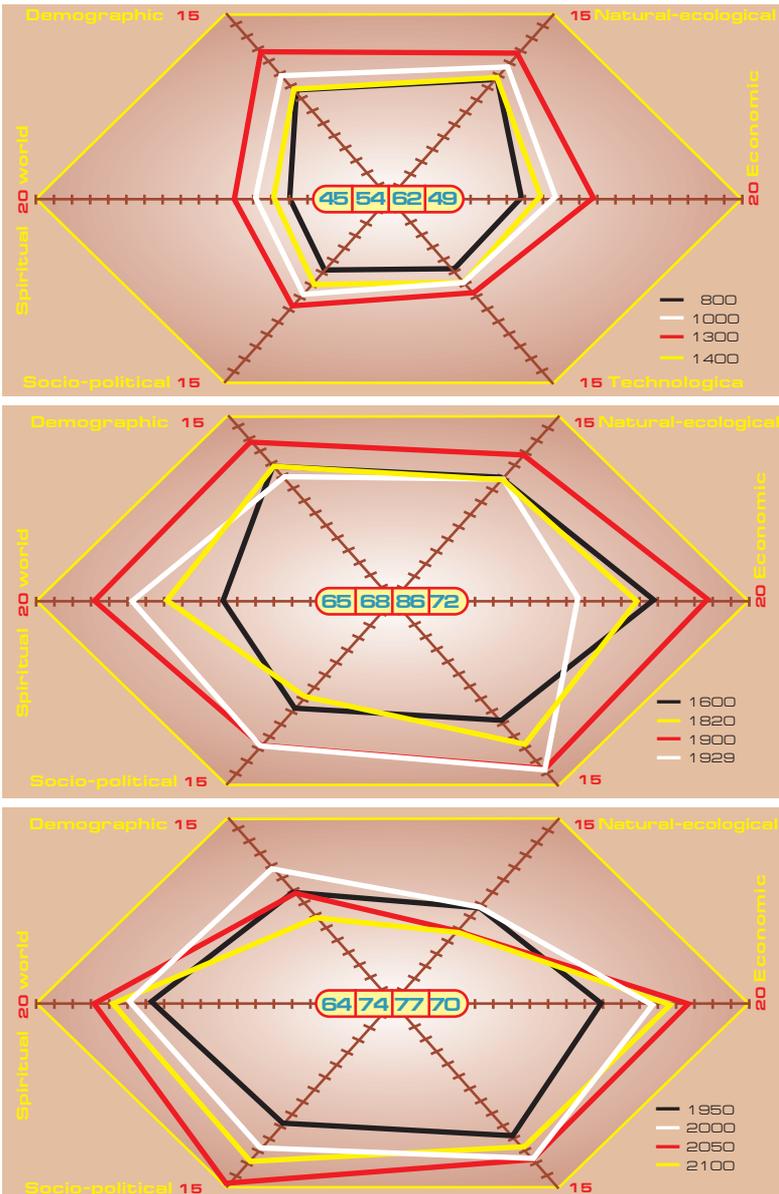
Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
800	9	10	6	8	6	6	45
1000	10	11	7	10	8	8	54
1200	11	12	8	11	9	10	61
1300	12	12	8	12	9	9	62
1400	9	10	7	9	7	7	49
1500	11	11	9	12	8	10	61
1600	11	10	10	15	9	10	65
1700	11	10	10	14	8	11	64
1750	12	10	10	13	8	12	65
1800	11	11	11	12	7	12	64
1820	11	10	12	14	8	13	68
1850	12	12	13	16	10	15	78
1870	12	13	13	17	9	16	80
1900	13	12	14	18	12	17	86
1913	12	11	14	18	13	17	85
1929	10	10	14	11	12	15	72
1938	11	10	13	15	9	13	71
1950	9	8	11	12	10	14	64
1970	10	8	12	16	11	14	71
1990	10	9	13	15	12	15	74
2000	11	8	13	15	12	15	74
2010 a	11	8	13	16	13	15	76
b	10	7	13	16	12	14	72
2020 a	10	8	14	17	13	15	77
b	9	7	12	16	12	14	70
2030 a	10	7	14	18	13	16	78
b	9	6	13	16	12	14	70
2050 a	9	6	13	17	15	17	77
b	8	5	12	16	12	15	68
2070 a	8	6	12	16	15	17	72
b	7	5	11	15	12	14	64
2100 a	7	6	12	16	13	16	70
b	6	5	10	15	11	13	60

\*Forecast: a – optimistic scenario, b – pessimistic

Figure 18.1

**Estimation of Dynamics of the Western Europe Civilization Based on the Geocivilizational Matrix**

Estimation in points according to the factors, the integral estimation in the center



### **18.2.4. Eastern European Civilization**

The Eastern European civilization is closely connected with western European. It developed rapidly in the Middle Ages – its integral indicator grew from 48 points in 1000 to 58 in 1300. After a pan-European crisis of the 14<sup>th</sup> c. when the general estimation reduced to 47, Eastern Europe began to revive again, its integral indicator grew by 1600 to 63 points. Further it increased only once – by 1900 (70 points), and all other time it was on the same or even lower level: Eastern Europe was constantly involved in conflicts between civilizations – Napoleon wars, World Wars I and II and smaller armed conflicts. As a result its integral indicator made 45 points only by 1950 – lower than the original level (*table 18.4* and *fig. 18.2*).

Having come under the sphere of influence of the Eurasian (USSR) civilization in the post-war period the Eastern European civilization restored its lost positions and its integral estimation grew to 62 points by 1990. By 2000 it dropped again (to 54 points) as transformation of the post-war space brought about a protracted crisis.

Before 2050 the Eastern European civilization will be able (provided that the positive scenario is implemented) to develop sustainably, especially if it takes the advantages accumulated by the western European civilization. In such case the integral indicator of Eastern Europe will raise to 62 points, despite its growth is restricted by demographic and natural-ecological factors. However, the pessimistic variant of developments shouldn't be excluded when as a result of a growing depopulation, depletion of natural resources, late mastering of the sixth and seventh technological orders, decline of competitiveness of local products, general estimation of the Eastern European civilization will fall to the critical level (44–46 points).

The opportunity that the Eastern European civilization will be absorbed by the western European by the middle of the 21<sup>st</sup> c. and melt in it should not be excluded. However, it will lessen the viability of the Western European civilization: it had to undertake an uneasy burden of transformation of the Eastern European civilization (as it was the case with the FRG with respect to the GDR). Therefore it is as likely as not that the resistance to a close integration with Eastern Europe will intensify in Western Europe, although the system of values is identical in many ways in both civilizations. It is likely that the final choice will be made within the near decades of the 21<sup>st</sup> c.

Table 18.4

## Dynamics of the Eastern Europe Civilization\*

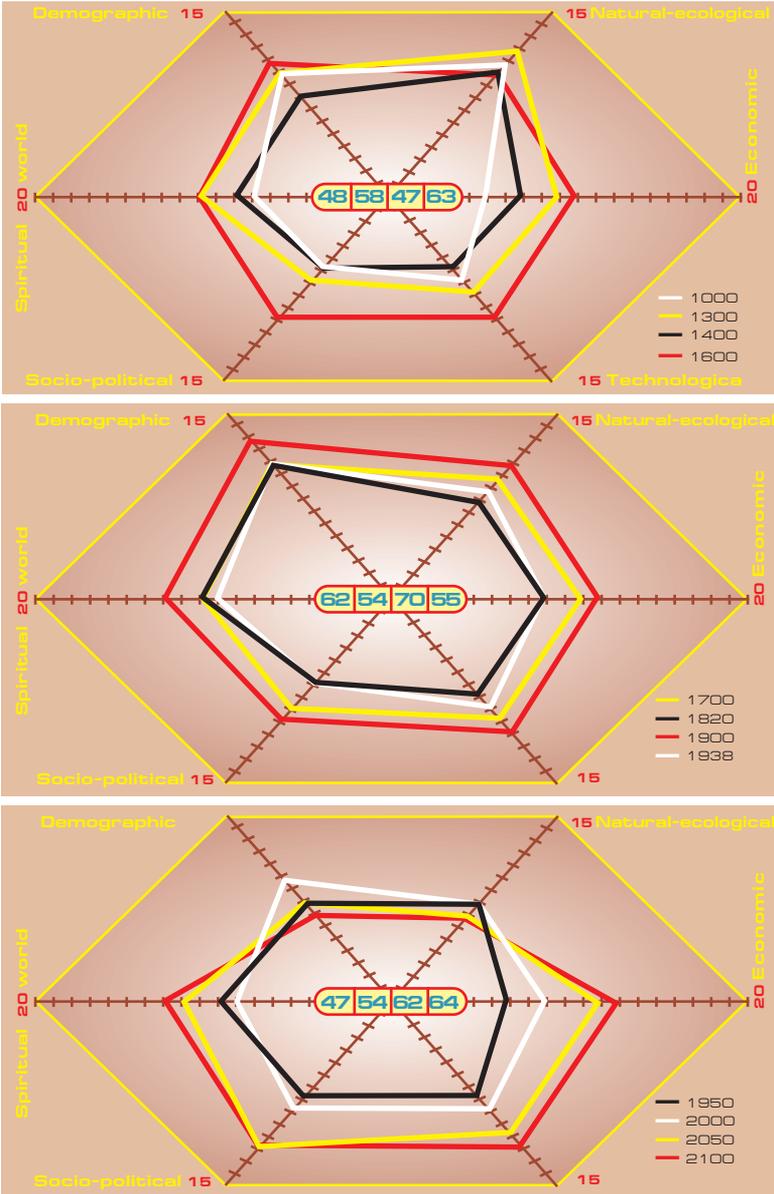
Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
1000	10	11	7	6	6	8	48
1200	11	12	8	8	8	10	57
1300	10	12	8	10	7	11	58
1400	8	10	6	8	6	9	47
1500	10	11	8	9	9	12	59
1600	11	10	10	11	10	11	63
1700	11	10	10	11	9	11	62
1750	12	10	10	10	9	11	62
1800	11	9	10	9	8	11	58
1820	11	8	8	9	7	11	54
1850	12	9	9	10	8	12	60
1870	12	10	10	11	9	12	64
1900	13	11	11	12	10	13	70
1913	13	11	11	12	9	12	68
1929	11	10	10	10	8	12	61
1938	11	9	9	9	7	10	55
1950	8	8	8	7	6	10	47
1970	10	9	10	9	8	12	58
1990	11	9	10	11	10	11	62
2000	10	8	9	9	9	9	54
2010 a	10	8	9	10	11	10	58
b	10	8	9	10	10	10	57
2020 a	10	8	10	11	11	11	61
b	9	7	9	9	10	10	54
2030 a	9	7	11	12	11	12	62
b	8	6	9	9	9	10	51
2050 a	8	7	11	12	12	12	62
b	7	6	8	9	9	10	49
2070 a	7	7	12	13	12	12	63
b	6	5	8	9	9	9	46
2100 a	7	7	12	13	12	13	64
b	6	4	8	8	9	9	44

\*Forecast: a – optimistic scenario, b – pessimistic

Figure 18.2

**Estimation of Dynamics of the Eastern Europe Civilization Based on the Geocivilizational Matrix**

Estimation in points according to the factors, the integral estimation in the center



### 18.2.5. Eastern European (Eurasian) Civilization<sup>1</sup>

Chapter 14 addresses the prehistory of the formation of the Eastern Slavic civilization on ample territories from the Black to the Caspian and to the Baltic and the White Sea, from the Carpathians to the Urals. This civilization united within it the heritage of ancient Greco-Roman civilization, proto-civilization of Antes, Scythians, Khazars, Turkmen and also numerous peoples inhabited the north of Eurasia or migrated through these territories to settle on the other.

Let's begin the estimation of dynamics of the Eastern Slavic (Eurasian) civilization from the year 500 – from the times of the Antes, although its genotype formed clearly in the period from the 8<sup>th</sup> to the 10<sup>th</sup> c. The results of the Delphi approach are given in [table 18.5](#) and [fig. 18.3](#).

The integral estimation of the original point (the year 500) is quite low – 30 points, first of all due to low indicators of socio-political, technological and economic factors, and the population number was not high. However, a fast technological and social progress, formation of extensive ancient Russian state, embracing of Christianity raised the integral estimation to 67 points by 1200 that is in line with the level of developed civilizations. The Mongolian inroad, feudal disunity, loss of thousands of people, devastation worsened the position of civilization and its estimation fell to 51 points at once by 1300, which corresponds the state of a deep-seated civilizational crisis.

The next three centuries were the period of a difficult revival of the Eastern Slavic civilization. **B.A. Myasoedov** mentions major characteristics of such revival: arrangement of economic life and population number growth; upturn of farming and construction of cities and fortified cloisters; joining Siberia; development of technologies such as metal making and smithery, shipbuilding and architecture; liberation from the Horde Yoke; establishment of the Moscow Tsardom; formation of national self-awareness with the Russian people through the efforts of **Alexander Nevsky**, **Sergey Radonejsky**, **Andrew Kurbsky**, **Joseph Volotstky**, declaration of Russia the Third Rome.

<sup>1</sup> This section is based on the data courteously provided by **Ya.G. Shemyakin**, Doctor of Economy, **[L.V. Leskov]**, Doctor of Physics and Mathematics, **A.N. Raikov**, Doctor of Engineering Sciences, **O.I. Malikova**, Doctor of Economy, **B.A. Myasoedov**, Candidate of Engineering Sciences, **L.M. Mironov**, Candidate of Economy.

Table 18.5

**Dynamics of the Eastern Slavic (Eurasian) Civilization\***

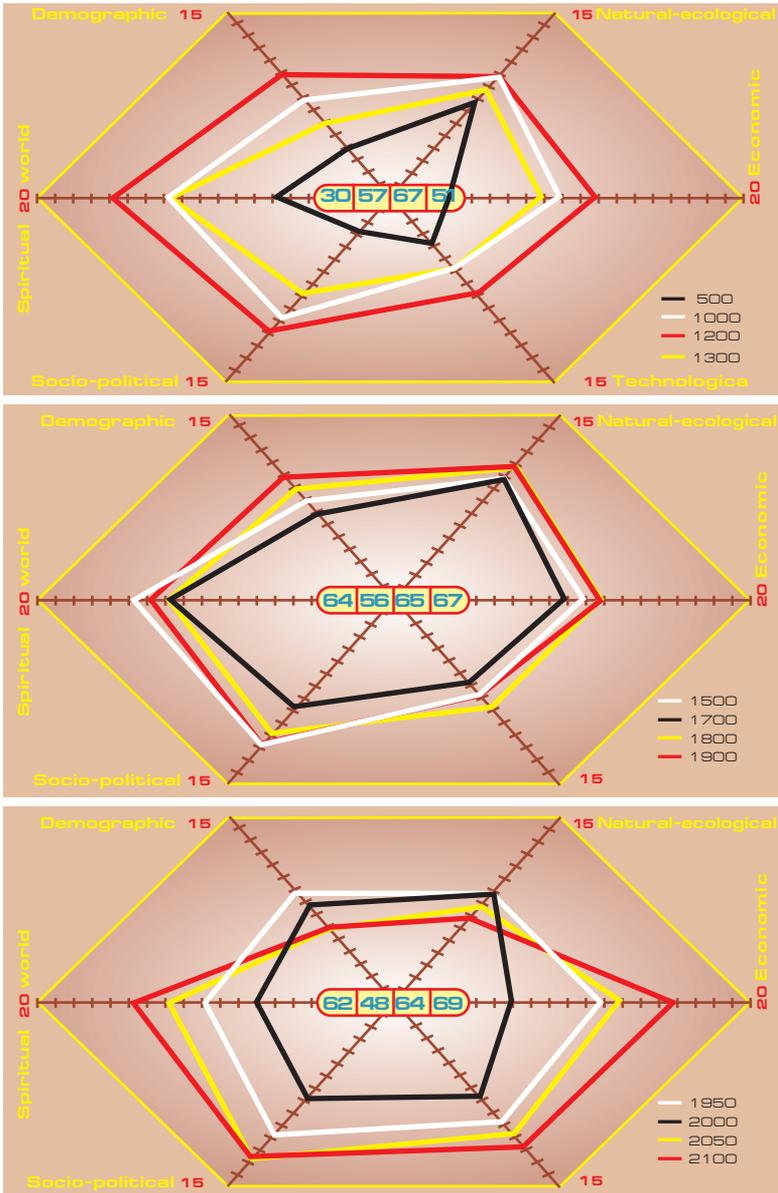
years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
500	4	8	4	4	3	7	30
800	6	9	5	5	5	9	39
1000	8	10	6	10	10	13	57
1200	10	10	8	12	11	16	67
1300	6	9	6	9	8	13	1
1400	7	9	7	10	10	14	57
1500	8	10	8	11	12	15	64
1600	6	9	6	9	9	12	51
1700	7	10	7	10	9	13	56
1750	8	11	8	12	10	14	63
1800	9	11	9	12	11	13	65
1820	9	11	8	12	11	13	64
1850	11	10	7	11	10	12	61
1870	11	10	7	11	12	13	64
1900	10	11	8	12	12	14	67
1913	10	10	10	13	14	12	69
1929	8	10	9	11	11	11	60
1938	8	10	11	11	9	10	59
1950	9	9	10	12	11	11	62
1970	9	10	11	11	13	13	67
1990	9	10	10	9	11	11	60
2000	8	9	8	7	8	8	48
2010	a	7	9	9	9	9	52
	b	7	8	9	7	9	49
2020	a	7	8	10	9	10	54
	b	6	7	8	10	7	46
2030	a	7	8	10	11	11	57
	b	5	7	8	9	8	45
2050	a	6	8	11	13	13	64
	b	5	6	6	12	8	46
2070	a	6	7	12	15	12	67
	b	4	5	7	9	9	43
2100	a	6	7	12	16	13	69
	b	4	5	7	9	7	40

\*Forecast: *a* – optimistic scenario, *b* – pessimistic

Figure 18.3

**Estimation of Dynamics of the Eastern Slavic (Eurasian) Civilization Based on the Geocivilizational Matrix**

Estimation in points according to the factors, the integral estimation in the center



However, military-political failures of the end of the reign of Ivan the Terrible and thereafter, heavy crop failures, political confrontation, Polish aggression led to the next civilizational catastrophe, which lowered the integral estimation by 1600 to 51 points, i.e. to the level of the period of the Mongolian inroad. The estimation of all six factors dropped sharply.

A little more than a century was required for the revival of civilization after such catastrophe. The transformations of **Peter I** fixed by **Catherine II**, the victory in the Patriotic War of 1812 made the Russian Empire one of the leaders of the world civilizational progress; the integral estimation increased by 1820 to 64 points, the estimation of all factors improved. **B.A. Myasoedov** states the following signs of revival of that period: improvement of the quality of life and population number growth; assimilation of a three-field system of farming, building of fleet (the development of industry may be added, especially metallurgy and production of weapons); economic upturn; stability of absolute monarchy, transformation of Russia into the European power; rise of culture, the establishment of the Academy of sciences, and opening of the Moscow University.

However, stagnation followed the period of rise; the integral estimation dropped to 61 points by 1850 (the main reason was a too late beginning of the industrial revolution, a late abolishment of the serfdom). The defeat of Russia in the Crimean war on the union of western European and Moslem civilizations, three world empires — British, French and Ottoman became an apparent indication of the decline.

From the last third of the 19<sup>th</sup> c. and to 1913 the revival of Russia short, but active began, and it raised its integral estimation to 69 points. Peasant, administrative and military reforms, an accelerated development of capitalism, construction of railroads and development of new lands in Siberia and in the south of the country, rise of science, culture and education conduced to it. However, a technological lagging of Russia from the West still remained, although reduced. A wave of terror, revolutionary upheavals and retaliatory repressions, a defeat in the Russian-Japanese war lowered the estimation of a socio-political factor. Russia was on the brink of a new civilizational catastrophe.

And it did not take long to happen. The disintegration of the Russian Empire, Civil War caused devastation and technological degradation of economy, became the reason of a loss of hundred thousands of people, including skilled workers and intellectuals.

By 1920 the integral estimation of the Eurasian civilization dropped to 45–47 points. And only by 1929 as a result of a determinative change of the course, transition from policy of military communism to market socialism based on the NEP, after rehabilitation of economy, rise of science and culture the general estimation raised to 60 points.

In the pre-military period a technological growth continued, but in actual fact the country found itself in the state of crisis, the integral estimation dropped from 60 points in 1929 to 59 in 1938. Collectivization, a breakthrough of the agricultural sector followed by light and food industry became the reasons for that; a wave of repression lighted first of all upon intellectuals — a creative potential of people; establishment of a totalitarian socio-political regime.

The victory in the Great Patriotic War (World War II) stiffened the creative spirit of people that allowed restoring economy in an unprecedented short period, making a scientific-technological breakthrough, mastering the fourth technological order on a large scale. The USSR became a superpower, one of the geopolitical poles, headed the world system of socialism, achieved the military-technological parity with the West, and it was the world leader by the rates of economic growth in the 50s. It entitles us to raise the integral estimation of the Eurasian civilization to 67 points by 1970.

However, in the 70–80s the signs of stagnations manifested themselves, the preconditions of a *civilizational crisis* matured. The ruling elite aged and it was already unable to administer the affairs of the state properly. The fifth technological order was mastered too late; socio-political renewal lagged behind. Having achieved success in confrontation with the USA during the war in Viet Nam, the USSR made a big strategic mistake through bayoneting into submission the attempts of humanization of socialism in Hungary and Czechoslovakia, and ventured upon the invasion in Afghanistan. The country found itself in international isolation, and lost its ground hastily in a geocivilizational space and lost in the «Cold War». As a result its integral estimation dropped to 60 points by 1990 that became an indication of a civilizational crisis.

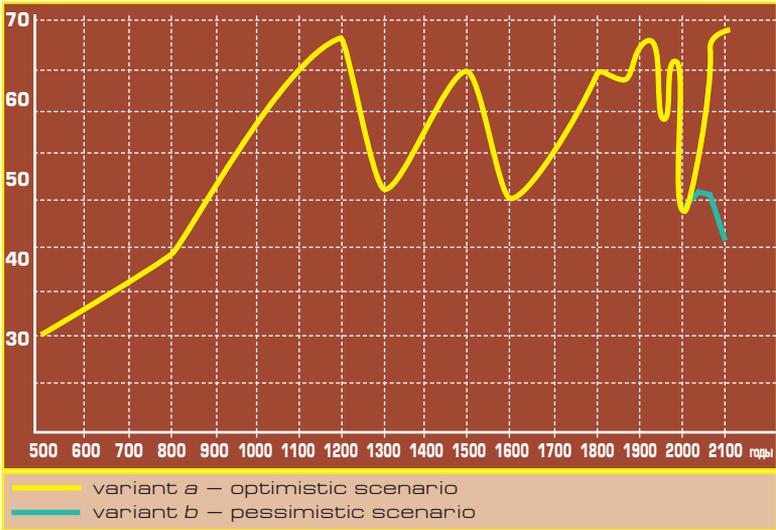
At the beginning of the 90s it transformed into a *civilizational catastrophe*. The changes began with a good intent, but the ruling upper circles with radical moods took power and the teams of their ideologists in new states and spaces of the former USSR turned out unable to give a correct evaluation of crisis and choose a reliable way-out of it. Supported by western politicians and consultants,

incompetent, but aggressively determined executives achieved through their unskilled actions the disintegration of Comecon, the Warsaw Pact Organization, and the USSR itself. The Eurasian civilization entered the path of self-liquidation, gave up its own and took patterned western civilizational values. A transition from the state-bureaucratic socialism to the spontaneous market capitalism of the period of the primary accumulation of capital occurred, the state property was ransacked under the flag of privatization, most population found itself beyond the poverty line. The results were technological degradation of economy, unprecedented decline in economy for a peaceful time, drop of the integral estimation to a catastrophic level — 48 points.

From the beginning of the 21<sup>st</sup> c. a slow revival of Eurasian (in a short composition and with weakened internal ties) civilization began. Unfortunately, it occurred mainly not through an internal rise, but due to favorable external factors. Two scenarios are clearly taking shape for an outlook to 2050: innovation-based-breakthrough and inertia-based-market. If a scientific-technological breakthrough is managed to be made, to implement an efficient innovative renovation of a technological base of society, economy and socio-political system, strengthen and develop integral ties inside the Eurasian civilization (within the CIS or in even shorter composition), then there is a chance that it will gradually revive, and its integral estimation will increase to 57 points by 2030, and to 69 points by 2100. If such opportunities are failed to be implemented, and the now tendency of the inertia-based market development persists (and more precisely its lack), then depopulation processes and processes of technological degradation will imminently intensify and a new crisis will hit economy. Under such condition a socio-political situation will aggravate to its ultimate on the spaces of the Eurasian civilization, and its integral estimation will low to supercritical 40—44 points. The Eurasian civilization will leave the historical scene for good and all, and its nucleus, Russian civilization, will find itself among the lagging, and a part of its territories will be divided between other, more successful civilizations. And although the probability of such tragic end is not too high, but the generation of the 20s and intellectual elite should be aware of the reality of such threat, a civilizational challenge of the 21<sup>st</sup> century to a full extent to respond to it, choose and implement the strategy of revival of the Eurasian civilization, to increase its role in geocivilizational space — as it was the case after previous civilizational catastrophes.

Figure 18.4

### Trajectory of Dynamics of the Eastern Slavic (Eurasian) Civilization (Integral Estimation)



The trajectory of dynamics of Eastern Slavic (Eurasian) civilization is shown in *fig. 18.4*.

### 18.2.6. Summary Estimation of Dynamics of Civilizations of Europe and North of Eurasia

Let's determine now the total estimation of the integral indicator by civilizations of Europe in retrospect and prospect (*table 18.6*).

In the first half of the 1<sup>st</sup> millennium A.D. the only civilization on the European continent – Greco-Roman – entered the last phase of its development; its estimation dropped from 78 points to 62 points by 300. By 500 a successor to the Greco-Roman civilization – Byzantium – turned out in the vanguard of the world progress (estimation 67 points). The entry of new civilizations in the world arena (Western European, and then Eastern European and Eastern Slavic) coincided in time with a complicated stage of the transition from ancient to the medieval world civilization. Therefore, their establishment occurred with great difficulties. This gives ground to lower the general European integral estimation of that period to 46 points.

Then the medieval world civilization entered the phase of rise; and the summary estimation of civilizations of Eurasia rose to 61 points. External factors interfered with a successful development — clash with the Mongolian civilization, and also plague and cholera epidemic. By the beginning of the 14<sup>th</sup> c. the summary estimation dropped again to 55 points.

In the early industrial period the western European and Eastern Slavic (Eurasian) civilization were on the rise — their integral estimations grew from 47 in 1400 to 63 points in 1750 and from 60 in 1600 to 62 points in 1800, respectively.

The industrial period was marked by considerable fluctuations in the summary integral estimation; it reached its maximum (74 points) at the beginning of the 20<sup>th</sup> c., but then after a wave of revolutions and two world wars it dropped to 58 points by 1950. In 1970–80s it rose again, but as a result of the crisis hit the Eurasian and Eastern European civilization it fell to 59 points by 2000.

Under the optimistic scenario the revival of the Eurasian civilization, the summary integral estimation of civilizations of Eurasia has a chance to grow to 65 points by 2050 and 68 points by 2100; the constraining factors will be demographic (depopulation) and natural-ecological (depletion of the mineral reserves). If they are completed by lagging with the assimilation of the sixth and seventh technological orders, low rates of economic growth and difficulties of integration under a modern model of globalization, then the pessimistic scenario of development will be implemented. Then the summary integral estimation will fall to 54 points by 2050, and to 48 points — by 2100. This will mean a crisis of European civilizations.

## **18.3. Measurements of Civilizational Dynamics of Asia and Africa**

### **18.3.1. Tendencies in the Dynamics of Population and GDP**

Asia and Africa are the center of germination of local civilizations of the 1<sup>st</sup> generation (Egyptian, Sumerian, Islamic, Babylonian-Assyrian, Chinese and Indian) in the period of the early class world civilization. Civilizations of the 2<sup>nd</sup> generation that came into a close contact with the Greco-Roman civilization of the

Table 18.6

### Summary Integral Estimation of Dynamics of Civilizations of Europe and North of Eurasia \*

Years	Integral Estimation of Civilization					Summary Estimation		
	Greco-Roman	Byzantine	Western European	Eastern European	Eastern Slavic (Eurasian)	Number of Civilizations	Amount	Summary Estimation
1	78					1	78	78
300	62					1	62	62
500	40	67			30	3	137	46
800		75	45		39	3	159	53
1000		69	54	48	57	4	228	57
1200		60	61	57	67	4	245	61
1300		49	62	58	51	4	220	55
1400		37	49	47	57	4	190	47
1500			61	59	64	3	184	61
1600			65	63	51	3	179	60
1700			64	62	56	3	182	61
1750			65	62	63	3	190	63
1800			64	58	65	3	187	62
1820			68	54	64	3	186	62
1850			78	60	61	3	199	66
1870			80	64	64	3	208	69
1900			86	70	67	3	223	74
1913			85	68	69	3	222	74
1929			72	61	60	3	193	64
1938			71	55	59	3	185	62
1950			64	47	62	3	173	58
1970			71	58	67	3	196	65
1990			74	62	60	3	196	65
2000			74	54	48	3	176	59
2010 a			76	58	52	3	186	62
b			72	57	49	3	178	59
2020 a			77	61	54	3	192	64
b			70	54	46	3	170	57
2030 a			78	62	57	3	197	65
b			70	51	45	3	166	55
2050 a			77	62	64	3	203	68
b			68	49	46	3	163	54
2060 a			72	63	67	3	202	67
b			64	46	43	3	153	51
2100 a			70	64	69	3	203	68
b			60	44	40	3	144	48

\*Forecast: *a* – optimistic scenario, *b* – pessimistic

ancient period also developed there. In the period of the medieval world civilization first Chinese and then Indian civilizations were in the vanguard, and only in several decades they gave the leadership to Western Europe. The data in *table 18.7* indicate such processes.

In the first millennium and a half of our era (before 1600) civilizations of Asia (Chinese, Indian, Japanese, Buddhist and Moslem) prevailed in the world by the number of population (their share made from 65 to 75%) and by the world GDP output (from 65 to 76%). The role of Africa was far more modest (7–12% of the population number on the planet and 7.1–11.7% of the world GDP output). Asia and Africa taken together determined a civilizational face of the planet.

The picture began to change in the early industrial and industrial periods. Although these regions occupy the leading positions in the population number of the planet now (Asia excluding Japan in 1820 – 65.2%, 2001 – 57.4%), however their share in the world GDP began to drop first slowly (in 1820 – 56.4%), then rapidly (in 1950 – 15.4%). In the dynamics of Chinese and Indian civilizations stagnation was replaced by regress caused by heavy consequences of colonialism. By the level of economic development (GDP per capita) these civilizations dropped to 21% (1973) of the average world indicator, i.e. they were in the state of a protracted civilizational crisis. The same tendencies were also observed in Africa.

However, in the second half of the 20<sup>th</sup> c. a turn occurred in the civilizational dynamics of Asia. It started from Japan whose share increased from 3% in 1950 to 7.8% in 1973 in the world GDP, and the relation to the world income per capita – from 91% to 279% for the same period. «Chinese» followed the «Japanese Miracle». The average annual GDP increase rates reached 5.02% of 1973 in the Heavenly Empire and 6.72% by 2001, and a share in the world GDP increased from 4.5% in 1950 to 12.3% in 2001. Then the turn of India came: for the last quarter of the 20<sup>th</sup> c. its share increased from 3.1% to 5.4% in the world GDP. And although these countries considerably lagged behind the world level by GDP per capita (China – 57% in 2001, India – 32%), but the fact is obvious: the giants have awaked from a long lethargic sleep and are gaining force. The same may be said about the Buddhist and Moslem civilizations. Africa still remains in the state of stagnation and a deep-seated crisis: its share in the world GDP is reducing, a lagging from the world average GDP per capita is increasing (from 42% in 1950 to 25% in 2001). Civilization is seriously ill and it hardly would be able to cope without the assistance from the other world.

Table 18.7  
**Demographic and Economic Development  
of Civilizations in Asia and Africa \***

Countries, regions		1	1000	1500	1600	1700	1820	1870	1913	1950	1973	2001	
<b>Population</b>													
<b>Asia</b> (excluding Japan)	a	171,2	175,4	268,4	360,0	374,8	679,4	780,8	925,7	1298	2140	3527	
	b	74,2	65,6	61,2	64,7	62,1	65,2	57,5	51,7	51,4	54,6	57,4	
	c		0,00	0,09				0,29	0,15	0,55	0,92	2,19	1,80
China	a	59,6	59,0	103,6	160,0	138	35,1	35,8	437,1	546,6	881,9	1225	
	b	25,8	23,5	23,5	28,8	22,9	36,6	28,1	24,4	21,7	22,5	20,7	
	c		0,6	0,1			0,41	-0,12	0,47	0,61	2,10	1,33	
India	a	75	7,5	1,10	135	165	209	253	304	359	580	1024	
	b	32,5	28,0	25,1	24,3	27,3	20,1	19,9	17,0	14,2	14,8	16,6	
	c		0,00	0,08			0,20	0,38	0,43	0,45	2,11	2,05	
Japan	a	3,0	7,5	15,4	18,5	27,0	31,0	34,3	51,7	83,8	108,7	126,9	
	b	1,3	2,8	3,5	3,3	4,5	3,0	2,7	2,9	3,3	2,8	2,1	
	c		0,09	0,14			0,22	0,21	0,95	1,32	1,14	0,55	
Other Asia	a	36,6	4,4	55,4	65	71,8	89,4	119,8	184,8	392,8	627,6	1228	
	b	15,9	15,5	12,6	11,7	11,9	8,6	9,4	10,3	15,6	17,3	20,0	
	c		0,01	0,06			0,15	0,59	1,01	2,06	2,40	2,15	
<b>Africa</b>	a	16,5	32,3	46,6	55,3	61,1	74,2	90,5	124,7	22,73	390,0	821,1	
	b	7,1	12,1	10,6	9,9	10,1	7,1	7,1	7,0	9,0	10,0	13,4	
	c		0,07	0,07			0,15	0,40	0,75	1,64	2,37	2,69	
<b>GDP</b> <b>Asia</b> (excluding Japan)	d	77,0	78,9	154	207	214	392	402	609	823	550	1223	
	e	75,1	67,6	61,9	62,5	57,7	56,4	36,1	22,3	15,4	16,4	30,9	
	f	450	0,00	0,13			0,29	0,05	0,97	0,02	5,17	5,41	
	j	101	450	572	572	571	577	550	658	634	1226	3256	
	h	103	103	101	92	93	83	63	58	30	30	54	
	China	d	26,8	26,6	61,0	96,0	82,8	229	190	241	240	740	4570
		e	26,1	22,7	23,9	29,0	22,3	32,9	17,1	8,8	4,5	4,6	12,3
		f		0,00	0,17			0,41	-0,37	0,56	-0,92	5,02	6,72
j		450	450	600	600	600	600	530	552	439	839	3583	
z	101	103	106	101	98	90	61	36	21	21	57		
India	d	33,8	33,8	60,5	74,2	90,8	111	135	204	222	495	2003	
	e	32,9	28,9	24,4	22,4	24,4	16,0	12,1	7,5	4,2	3,1	5,4	
	f		0,00	0,12			0,19	0,38	0,97	0,33	3,54	5,12	
	j	450	450	550	550	550	533	533	673	619	853	1957	
h	101	103	97	92	89	80	61	44	29	21	32		
Japan	d	1,2	3,2	7,7	9,6	15,4	20,7	25,4	71,7	161	1243	2625	
	e	1,2	2,7	3,1	2,9	4,1	3,0	2,3	2,6	3,0	7,8	7,1	
	f		0,10	0,18			0,31	0,41	2,44	2,21	9,29	2,71	
	j	40	425	500	520	570	669	737	-1387	1921	11 434	20 683	
h	90	97	88	87	93	100	84	91	91	279	342		
Other Asia	d	77,0	78,9	154	207	214	392	402	823	823	2623	11480	
	e	16,0	16,0	12,6	11,1	10,9	7,5	6,9	6,8	6,8	8,7	13,2	
	f		0,01	0,10			0,16	0,78	2,19	2,19	6,00	4,61	
	j	450	450	565	565	565	584	882	926	926	2049	3998	
h	101	103	100	95	94	88	44	44	44	50	66		
<b>Africa</b>	d	7,1	13,7	19,3	23,3	25,7	31,2	79,5	203	203	550	1223	
	e	6,9	1,7	7,8	7,1	6,9	4,5	2,9	3,8	3,8	3,1	3,3	
	f		0,01	0,15			0,32	2,11	1,82	1,82	4,90	3,05	
	j	430	425	4,4	422	421	420	637	894	894	141,0	1485	
h	97	97	73	71	68	63	42	42	42	34	25		

\* [264, p. 264–269]

*a* – population, mln. people; *b* – in % of the world; *c* – average annual increase rates of a preceding period, %; *d* – GDP output, mln. USD 1990; *e* – % of the world GDP; *f* – average annual increase rates of a preceding period; *j* – GDP per capita, USD 1990; *h* – % of the average world data

### 18.3.2. Indian Civilization

The evaluation of the civilizational dynamics of *India* is given in *table 18.8.* and *fig. 18.5.* In the first millennium and a half of our era the Indian civilization was in the lead in the global civilizational space – by share of the population number of the world (the estimation of a demographic factor makes 10–12 points); development of economy (11–15 points), by wealth, diversity and intensity of spiritual life (14–17 points) – against the background of a deep-seated crisis suffered by civilizations of the Mediterranean, Near East and North of Eurasia. The integral estimation of India reached its maximum that period in 1–300 A.D. (76 points).

However, in the next centuries the trajectory of civilizational dynamics of India began to descend. The overpopulation of the country told and the worsening of the environmental situation related to it, a belated transition to the manufactory and machine-based technological base of production, feudal disunity, and inroads of foreign invaders. The establishment of the colonial dominance and expansion of the British industrial production became the cause of the downfall of thousands of Indian craftsmen (first of all, weavers) whose goods were ousted not only from the world but national market. As a result the integral estimation of the Indian civilization dropped from 75 points in 1600 to 61 in 1800 and 47 in 1870. A demographic indicator fell from 10 points in 1700 to 8 points in 1800–1870, and economic – from 14 points in 1600 to 6 points in 1870–1900. The ancient civilization found itself in the state of the most protracted and deepest crisis for its whole history.

Only after World War II when India recovered independence, a difficult and long way of its revival began. A part of population of the country separated after a series of bloody clashes and made a part of the Moslem civilization (Pakistan). The integral estimation of the Indian civilization rose from 50 points in 1938 to 64 in 2000, first of all due to the increase in the estimations of economic (from 7 to 12 points), socio-economic (from 8 to 12 points) and technological (from 5 to 8 points) factors. A fast growth of population number and pressure on the environment remained the impeding factors.

For the period up to 2050 two possible scenarios of development of the Indian civilizations are taking shape. If its technological lagging from Western and North American civilization is bridged, and economic indicators continue growing at the priority rates, then

India will ensure the competitiveness of its goods and services on the world market and establish conditions for a socio-political stability in the country. Then its integral estimation will grow to 75 points by 2050, and to 78 – by 2100. And in such case the constraining factors will include the crisis of overpopulation (although its severity might somewhat reduce) and as a result a considerable demographic pressure on the environment.

However, the situations should not be excluded when a pessimistic scenario is implemented. In such case demographic and ecological crises will overlap; a belated assimilation of the sixth technological order will intensify them even more, and hence a considerable decline in the competitiveness of local products on the world market, and also a growth of social tension and possible armed conflict with Pakistan. Then the integral estimation might fall from 64 points in 2000 to 52 points in 2050 and 45 in 2100 (that will become an indication of crisis of the Indian civilization), first of all due to the fall in the estimation of demographic (from 9 to 7 and 5 points, respectively), natural-biological (from 6 to 4 and 3 points) and socio-political (from 12 to 9 and 8 points) factors.

It appears that an optimistic or a similar scenario of development of the Indian civilization in the 21<sup>st</sup> c. is more likely under transition of all humankind to humanistically-noospheric post-industrial society.

### 18.3.3. Chinese Civilization

Let's consider a Delphi estimation of the dynamics of other ancient civilization – **Chinese** (*table 18.9* and *fig 18.6*).

In the 1<sup>st</sup> and beginning of the 2<sup>nd</sup> millennium A.D. the Chinese civilization as well as Indian was on the leading positions in the world. The invention of compass, powder, paper money referred to China; bookprinting originated here. In the early industrial period China maintained the world leadership in the population number (36.6% of all people on the planet in 1700), GDP output (32.9% of the worldwide indicator); in 1600–18200 the integral estimation made 74 points. However, a long civilizational crisis that embraced nearly a century and a half combusted. In 1820–1870, the population number reduced from 381 to 358 mln. people, a share in the population of the world fell to 28.1%, a share of the world GDP – to 17.1%; the periods of 1620–1870 and 1913–1950 were described

Table 18.8  
**Dynamics of the Indian Civilization \***

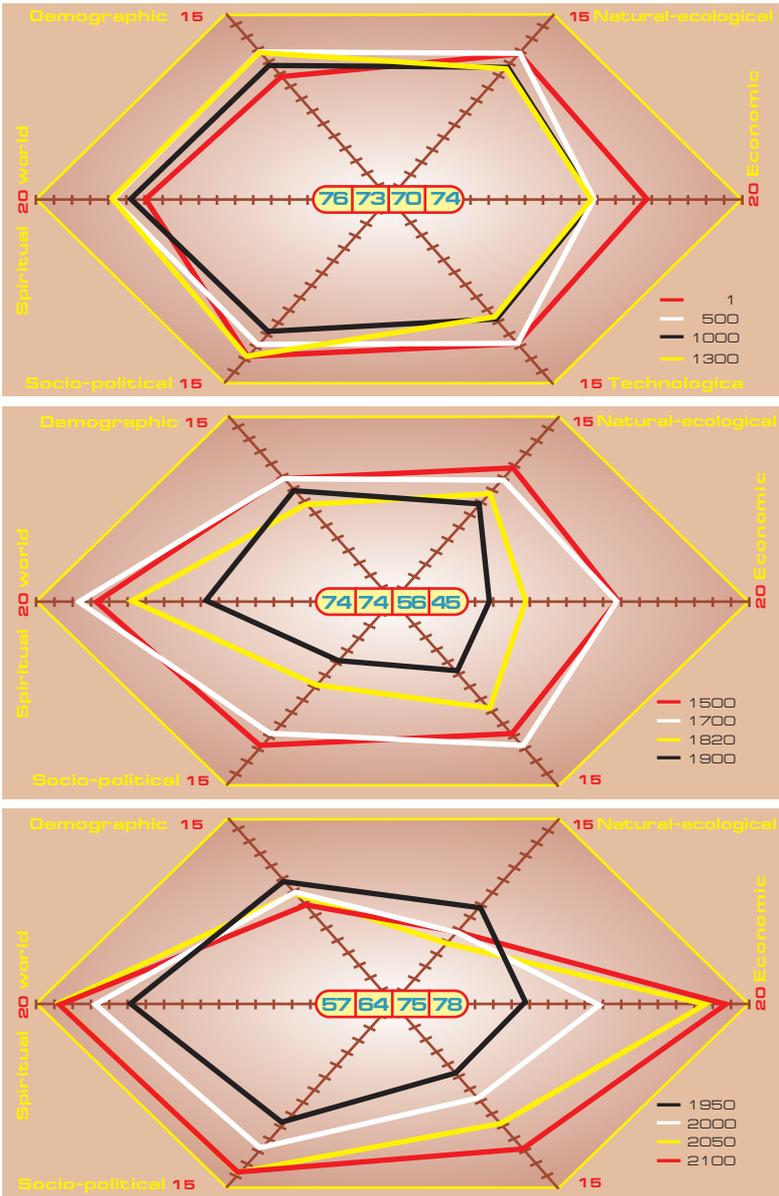
Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
1	10	12	12	15	13	14	76
300	12	12	12	12	12	16	76
500	12	11	11	12	12	15	73
800	10	11	11	12	10	14	68
1000	11	11	10	12	11	15	70
1200	10	12	10	11	12	15	70
1300	12	11	10	12	13	16	74
1400	11	11	11	12	13	16	74
1500	10	11	11	13	12	17	74
1600	9	10	12	14	12	18	75
1700	10	10	12	13	11	18	74
1750	9	9	11	12	10	17	68
1800	8	8	10	10	9	16	61
1820	8	9	9	8	7	15	56
1850	8	9	8	7	6	14	52
1870	8	9	7	6	5	12	47
1900	9	8	6	6	5	11	45
1913	9	8	6	7	6	12	48
1929	10	9	6	7	9	13	54
1938	10	7	5	7	8	13	50
1950	10	8	6	8	10	15	57
1970	9	7	5	9	13	17	60
1990	9	7	7	10	12	17	62
2000	9	6	8	12	12	17	64
2010 a	10	6	8	14	12	18	68
b	9	5	7	13	10	16	60
2020 a	9	6	9	15	13	18	70
b	8	5	8	13	10	15	59
2030 a	9	5	10	16	13	19	72
b	7	4	7	12	9	15	54
2050 a	9	5	10	18	14	19	75
b	7	4	7	11	9	14	52
2070 a	9	6	12	19	14	19	79
b	6	3	7	10	8	15	49
2100 a	8	6	12	19	14	19	78
b	5	3	6	10	8	13	45

\*Forecast: a – optimistic scenario, b – pessimistic

Figure 18.5

**Estimation of Dynamics of the Indian Civilization Based on the Geocivilizational Matrix**

Estimation in points according to the factors, the integral estimation in the center



by an absolute decline in the GDP output. Both western European and Japanese aggressions conducted to it, and also revolution and many-year civil war. As a result the integral estimation reduced to 49 points by 1950.

Table 18.9

**Dynamics of the Chinese Civilization \***

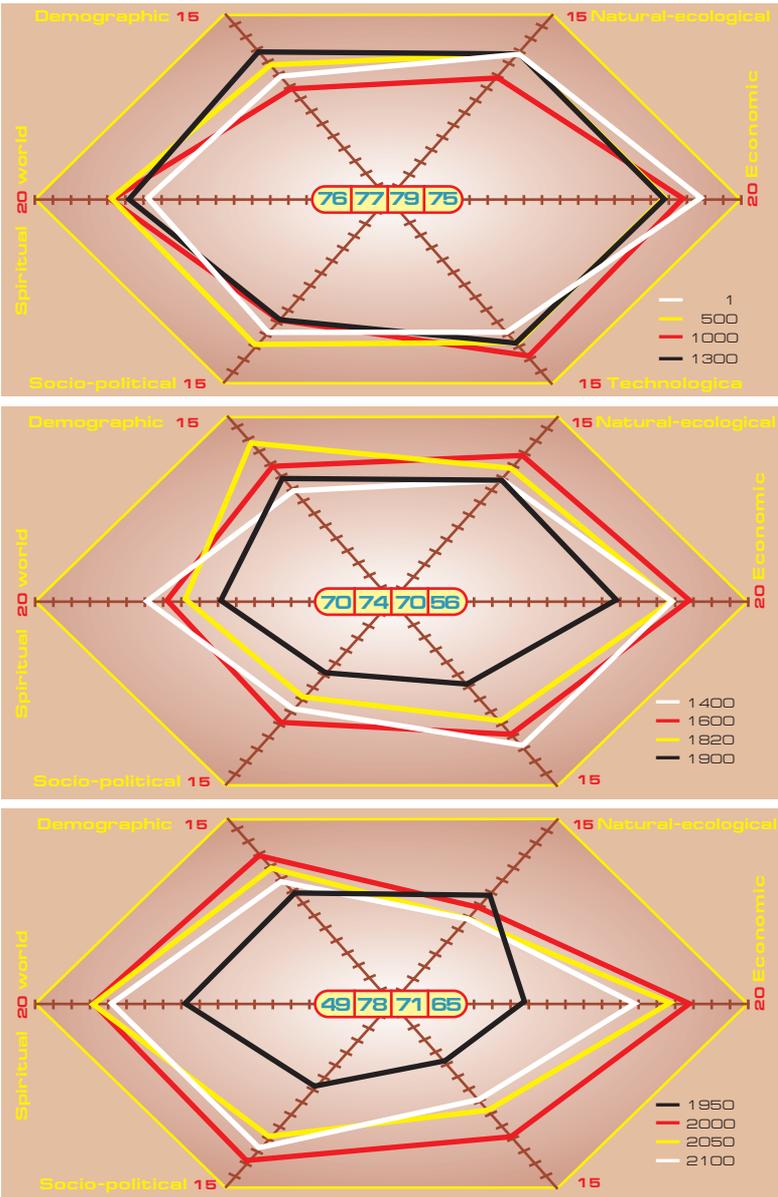
Years	Factors					Integral		estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world		
Maximum estimation in points	15	15	15	20	15	20	100	
1	10	12	11	18	11	14	76	
300	12	12	12	17	11	15	79	
500	12	12	12	16	10	15	77	
800	12	12	12	16	11	16	79	
1000	11	12	12	16	12	16	79	
1200	10	11	13	17	12	17	80	
1300	9	10	13	17	10	16	75	
1400	9	10	12	16	9	14	70	
1500	10	11	12	15	10	13	71	
1600	11	12	11	17	10	13	74	
1700	11	11	11	19	9	13	74	
1750	12	11	10	18	9	13	73	
1800	13	11	10	17	8	12	71	
1820	13	11	10	16	8	12	70	
1850	10	10	8	15	7	11	61	
1870	9	10	8	14	6	11	58	
1900	10	10	7	13	6	10	56	
1913	10	10	7	10	5	11	53	
1929	10	10	6	10	6	11	53	
1938	10	9	6	9	5	9	48	
1950	9	9	5	7	7	12	49	
1970	10	9	8	9	9	15	60	
1990	11	9	9	13	11	16	69	
2000	12	8	11	17	13	17	78	
2010 a	12	8	11	18	13	18	80	
b	11	7	10	17	12	17	74	
2020 a	13	9	10	17	14	18	81	
b	11	8	9	16	12	16	72	
2030 a	12	8	11	16	12	18	77	
b	10	7	8	15	11	15	66	
2050 a	11	7	9	16	11	17	71	
b	9	6	7	13	9	13	57	
2070 a	10	7	9	15	10	16	67	
b	8	5	7	11	8	12	51	
2100 a	10	7	8	14	10	16	65	
b	7	5	6	9	7	11	45	

\*Forecast: a – optimistic scenario, b – pessimistic

Figure 18.6

**Estimation of Dynamics of the Chinese Civilization Based on the Geocivilizational Matrix**

Estimation in points according to the factors, the integral estimation in the center



After the end of the civil war and establishment of the People's Republic of China a fast rise began, interrupted not for a long time by «cultural revolution». Record GDP growth rates fell to the end of the 70s — about 10% of annual average. The population number increased at the moderate rates, technological base improved; the competitiveness of goods grew on the world markets. China ensured a socio-political stability and smooth conditions for generation change; it became an example of sustainable development for all countries in the world. The integral estimation rose from 49 to 78 points for a half of the century, first of all due to economic (17 points out of 20), socio-political (13 points out of 15) factors, and also spiritual sphere (17 points of 20). Many experts (both in Russia and in the West) believe that in the near decades China will turn into the second super power, and geopolitical space of the planet will become bipolar again.

However, the outlooks of the Chinese civilization are not that bright in the 21<sup>st</sup> c. as it might appear if the tendencies prevailed during the last quarter of the century be extrapolated on the future.

**First**, the restraints of growth will operate — demographic and natural-ecological factors. By 2030–2040 under the UN's forecast China will enter the period of depopulation, aging of most population, reducing of a share of nationals in the innovative active age. In such case even under a favorable development of events the estimation of a demographic factor will drop from 12 points in 2009 to 10 in 2100, and under unfavorable — up to 7. The natural-ecological factor will become even stronger restraint, fast depletion of their own (especially energy) resources, deepening of dependence on import, and also pollution of the environment by a billion and a half of nationals and thousands of plants and factories. As a result the estimation of a natural-ecological factor will fall from 8 points in 2000 to 7 points in 2100 under optimistic and to 5 points under the pessimistic scenario.

**Second**, China has no sufficient innovative potential in order to implement a large-scale mastering of the sixth technological order in the 20–30s of the 21<sup>st</sup> c. and the seventh order — in the 50–70s. As a result the competitiveness of the Chinese goods and all Chinese economy will decline on the world markets. The estimation of a technological factor will fall from 11 points in 2000 to 9 points in 2050 and 8 in 2100 under the optimistic scenario and to 7 and 6 points, respectively, under pessimistic. This will inevitably tell on the economic factor: its estimation will fall from 17 maximum points

in 2000, to 16 in 2050 and 14 in 2100 under the optimistic scenario and 13 and 9 points, respectively, under pessimistic. The situation may be partially improved provided that the Russian scientific-intellectual and Chinese innovative-economic potential will be able to integrate not only in the military-technological industries, but civil industries. Such partnership will permit to enhance the competitiveness of economy of both civilizations under conditions of a scientific-technological turn in the vanguard countries, establishment of the post-industrial technological mode of production. Otherwise, both Russia and China will be pushed back to the periphery of the world technological and economic space.

**Third**, the downfall of competitiveness of products and fall in the GDP growth rates and level of life will disturb social stability, and aggravate contradictions in the geopolitical sphere. The estimation of a socio-political factor will drop from 13 points in 2000 to 11 points in 2050 and 10 in 2100 by an optimistic scenario and 9 and 7 points under pessimistic. The worst of it that this tendency might tell adversely on the Russian-Chinese relations, especially as the number of emigrants from China increases in the Far East by a geometric progression. It should be taken into account that radical, long-term civilizational interests of China and Russia if not coincide, then are quite close, and it is necessary for us to maintain partnership relationships.

One of the most tricky geopolitical problems causing tension between China and the USA — is the question of Taiwan. If the island is managed to unite with continental China through peaceful efforts, as it was the case with Hong Kong and Macao (the principle «one country — two systems»), this will strengthen economy of China and consolidate its positions in the international arena, the more so as the differences between these two systems are not large and gradually bridging over. Then chances for the implementation of the optimistic scenario will grow considerably.

### **18.3.4. Japanese Civilization**

The third major player in the Asian civilization arena is the Japanese civilization. It is several millennia younger than Indian and Chinese and formed approximately in the middle of the 1<sup>st</sup> millennium A.D. as one of local civilizations of the 3<sup>rd</sup> generation. A share of Japan in the total number of population on the planet

made only 2.8% (7.5 mln. people) by 1000 and reached its maximum by 1700 – 4.5% (27 mln.), but it reduced further. A share in the world GDP was also as inconsiderate as population (2.7% in 1000, 4.1% in 1700). As Japan was long on the outskirts of civilizational world, and its territory is restricted to several islands in the Pacific ocean, then before the beginning of the 20<sup>th</sup> c. the country did not play any noticeable role in the world arena. Only after its victory over Russia in 1905 and especially after successful actions of its army against the USA in World War II (Pearl Harbor) they began to speak about Japan as the state possessing a real force. The «Japanese Economic Miracle» of the 50–70s of the 20<sup>th</sup> c. became a real sensation in the world when economy of the country demonstrated record growth rates having just recovered from a terrible defeat in war and the atomic strike. Japan threw down a challenge to the USA that felt at the unachievable heights.

However, in the 80–90s a potential of an innovative breakthrough was already nearly exhausted, economy entered a period of stagnation; mean age of population grew sharply. For an outlook, under the unfavorable scenario, these tendencies might intensify, and Japan will find itself in the second echelon of civilizations.

A Delphi estimation of the dynamics of the Japanese civilization is given in [table 18.10](#) and [fig. 18.7](#).

The major restrictor of the development of the Japanese civilization throughout its historical path is a natural-ecological factor: a small territory of the country, a lack of any considerable natural resources, frequent natural calamities (earthquakes, tsunami etc.). As the population number grows, the estimation of this factor falls constantly – from 6–7 points in 500–1500 to 4 points by 1950; by the middle of the 21<sup>st</sup> c. it will drop to 3 points, and by the end of the century – to 2 points (under a negative scenario). Reproduction processes can't take place in Japan without replenishment from external sources. The awareness of such fact inures them to be hard-working, patient and inventive.

From the moment when it appeared on the historical scene and until the 17<sup>th</sup> c. the Japanese civilization developed sustainably and its integral estimation rose constantly reaching 57 points as a result. However, then Japan elected the path of self-isolation, refused from dialogue and mutual exchange in achievements with other civilizations of the world. It slowed down its development; the integral estimation fell to 49 points by 1850. The restoration of Meiji (1868) awoke Japan, gave impetus to a rapid rise of its econo-

my; as a result the integral estimation increased to 67 points by 1913, a position of Japan in a geocivilizational space improved fast. But it brought about the growth of military spirits in the country: the ruling elite decided that all problems of Japan might be removed through territorial seizures. Thus, the war on China, and then the USA were unleashed.

The defeat in World War II (by 1950 the integral estimation fell to 48 points) undeceived people and caused the government to set a ceiling with respect to military expense — not more than 1% of GDP. It conduced to a speedup of a technological progress in civil sectors, generated a «Japanese Miracle» — GDP growth rates reached 9.29% in 1951–1978, and 10.7% — in 1981–1990. A share in the world GDP increased from 3 to 7.8%, Japan became the second power in the world after the USA by this indicator. The estimation of a technological factor increased from 9 points in 1950 to 13 in 1990, economic — from 9 to 17 points, integral estimation — from 48 to 74 points. Economic expansion of Japan in the countries of the Southeastern Asia contributed a lot to it.

However, it soon became clear that its own resources were obviously not enough to proceed at the same fast rates. The GDP increase dropped from 9.29% in the third quarter of the 20<sup>th</sup> c. to 2.71% in fourth, and at the end of the 20<sup>th</sup> c. stagnation began, and decline in the volume of production at times. An uneasy situation formed in the demographic sphere: the birth rate declined, mean age of the country nationals grew considerably. All indicates that such situation will not change in the immediate future. Therefore even under the optimistic variant of developments the integral estimation will drop to 65 points by 2050, and to 62 points — by 2100 (under pessimistic to 51 and 42 points respectively, and the country will find itself again in a deep-seated and long civilizational crisis).

The way-out could be found on the path of partnership and development of integral ties with neighboring civilizations — China and Russia. However, China also suffers from a scarcity of natural resources, is a rival of Japan on the world markets and can't forgive many-year occupation of its territory to this day. An extremely fostered problem of «northern territories» — the Kurilles — impedes the establishment of friendly relations with Russia. Only in the case if Japan could assess its economic position soberly, its economic and ecological opportunities, it will understand that the only opportunity for it to prevent a civilization cri-

Table 18.10  
**Dynamics of the Japanese Civilization\***

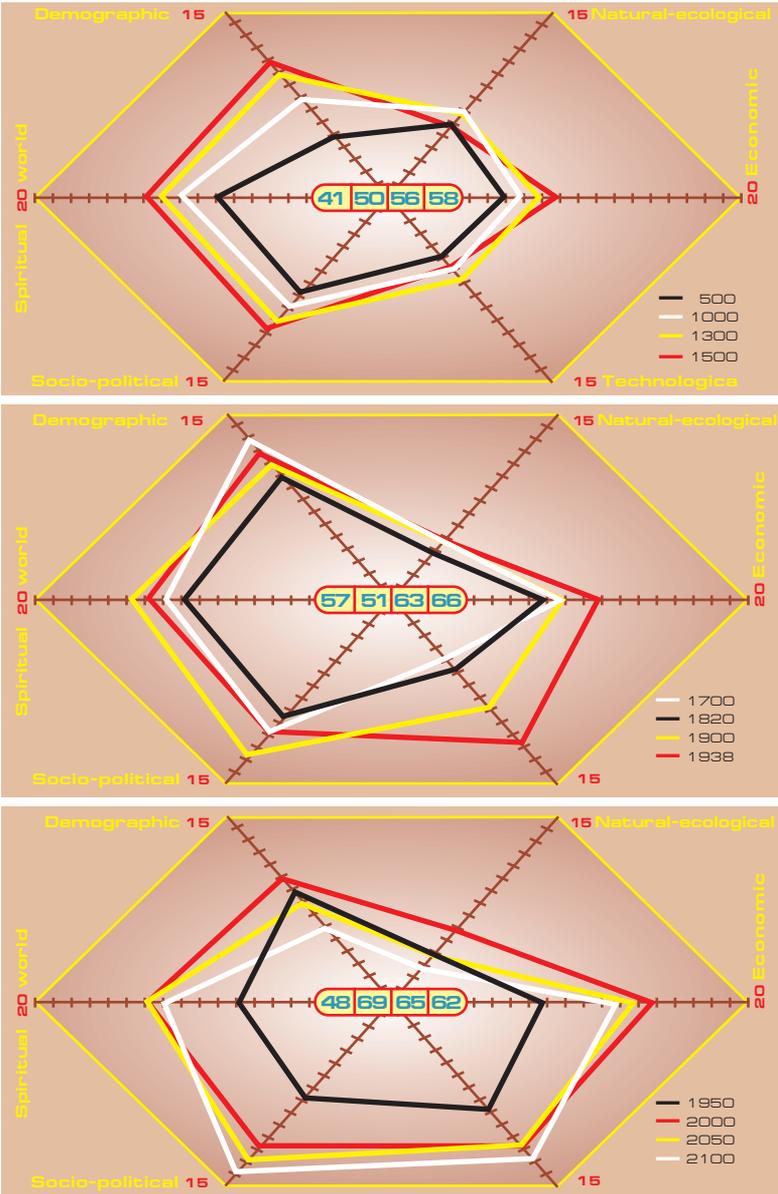
Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
500	5	6	5	7	8	10	41
800	7	7	6	8	9	11	48
1000	8	7	6	8	9	12	50
1200	9	7	7	9	10	12	54
1300	10	7	7	9	10	13	56
1400	10	6	7	10	11	13	57
1500	11	6	6	10	11	14	58
1600	12	5	6	10	12	14	59
1700	13	5	5	10	11	13	57
1750	12	5	5	10	11	13	56
1800	11	5	5	9	11	13	54
1820	10	4	6	9	10	12	51
1850	9	4	6	8	10	12	49
1870	10	4	7	9	11	13	54
1900	11	5	9	10	13	15	63
1913	12	5	10	11	13	16	67
1929	12	5	11	12	12	15	67
1938	12	5	12	12	11	14	66
1950	9	4	9	9	8	9	48
1970	10	5	11	15	11	11	63
1990	10	6	13	17	13	15	74
2000	10	6	12	15	12	14	69
2010 a	10	5	13	14	12	15	69
b	9	5	12	13	10	14	63
2020 a	9	5	13	13	13	15	68
b	8	4	11	13	9	14	59
2030 a	9	4	12	13	14	14	66
b	7	3	11	12	9	13	55
2050 a	8	4	12	14	13	14	65
b	6	3	10	12	8	12	51
2070 a	7	3	13	14	14	13	64
b	5	2	9	11	8	10	45
2100 a	6	3	13	13	14	13	62
b	4	2	9	10	7	10	42

\*Forecast: a – optimistic scenario, b – pessimistic

Figure 18.7

**Estimation of Dynamics of the Japanese Civilization Based on the Geocivilizational Matrix**

Estimation in points according to the factors, the integral estimation in the center



sis is to develop close strategic partnership with Russia in harnessing natural resources of the Far East and Eastern Siberia to a mutual benefit. Furthermore, Japan needs to overcome shortsighted self-seeking of TNC that have manifested itself to a full extent when developing the Sakhalin shelf by the Japanese-US monopolies.

### **18.3.5. Buddhist Civilization**

The Buddhist civilization occupies a special position in a geocivilizational space of the planet. Such countries may be included here as Sri Lanka, Nepal, Thailand, Burma, Mongolia and (with a certain share of conditionality) Viet Nam and Korea. This civilization has no exact boundaries or a recognized leader and equally a territorial, economic and socio-cultural unity. The main thing that unites these countries is the prevalence or a comparatively wide spread of Buddhist beliefs among their nationals.

Each state of the Southeastern Asia has its own fate, special trajectory of historical dynamics, but certain general features may be found with them. In the first millennium and a half A.D. a comparatively high level of development of technologies, economy and culture was typical of them, but it dropped drastically when these countries became colonies or semi-colonies of western European states. During World War II many countries of the Buddhist civilization became the arena of combat operations that caused an enormous damage to them; a series of liberation revolutions changed a socio-political position of these countries in the world; their economy began to develop at the rates never seen yet. However, at the end of the 90s the states of the Southeastern Asia got in the clutch of finance-economic crisis.

The idea about the development of certain countries of the Buddhist civilization in the 20<sup>th</sup> c. is given in *table 18.11*.

While by the beginning of the industrial period a gap in GDP per capita between the countries of the Buddhist civilization was comparatively minor (1820 – USD 646 in Thailand, USD 492 in Sri Lanka – 31%), then by the end of this period it reached a considerable scale (in 2000 – USD 13222 in South Korea and USD 1353 in Burma – 9.8 times). Economic and

demographic development of the said countries was constantly interrupted by wars and revolutions, however, by the end of the century the states of the Southeastern Asia developed at quite fast rates.

The estimation of the dynamics of the Buddhist civilization is given in *table 18.12*.

In the 1<sup>st</sup> – beginning of the 2<sup>nd</sup> millennium A.D. technological, economic and socio-political position of the countries of the Buddhist civilization slowly, but gradually improved; therefore their integral estimation grew from 47–48 points at the beginning of the 1<sup>st</sup> millennium to 51 points in 1200. The Mongolian conquest worsened these indicators, but then they restored and grew until 1750 and reached their maximum of 59 points. After spread of the industrial civilization in the countries of the Southeastern Asia and before 1950 (time when most of them were liberated from the colonial oppression) the integral indicator constantly fell (to 43 points). In the last quarter of the century development of the Buddhist civilization (especially in South Korea and Thailand, and then in Viet Nam) went at the accelerated rate, as a result its integral estimation rose to 64 points by 2000.

Table 18.11

**Dynamics of the Leading Buddhist Countries\***

Countries		1820	1850	1870	1990	1913	1929	1938	1950	1960	1970	1980	1990	2000
Thailand	a	4,7	5,2	5,7	7,3	18,7	12,1	13,1	20,0	27,5	37,1	47,0	55,2	62,4
	b	3,0		4,1		7,3	9,6	12,4	16,4	29,7	62,8	120,6	277,6	395,0
	c	646		712		841	793	826	870	1078	1694	2554	4629	6123
Burma	a	3,5	3,9	4,2	10,2	12,3	14,4	16,1	19,5	22,8	27,4	33,3	38,5	48,1
	b	1,8		2,1	7,3	8,4		11,9	7,7	12,9	17,6	97,4	30,8	56,5
	c	504		504		685		870	396	564	642	823	800	1353
Sri Lanka	a	1,2	2,2	2,8	3,9	4,8	5,7	6,0	7,5	9,9	12,5	14,9	17,2	19,2
	b	0,6	1,2	2,4	5,0	5,9	7,2	7,2	9,4	12,8	18,1	26,1	39,5	70,1
	c	492	564	851	1192	1234	1203	1225	1253	1300	1509	1849	2537	3645
South Korea	a	9,4	9,5	9,8	10,6	10,6	13,7	15,4	20,8	24,8	32,2	38,1	46,9	47,3
	b	5,6		5,9	8,7	8,7	13,9	12,4	16,0	27,4	63,0	156,8	407,9	677,9
	c	600		604	820	820	1014	1459	770	1105	1954	4114	8704	13222
Viet Nam	a								25,3	31,7	42,8	53,7	65,5	78,5
	b								16,7	25,3	31,3	40,7	69,0	140,5
	c								660	798	731	758	1053	1790
Mongolia	a								0,8	0,9	1,2	1,7	2,2	2,6
	b								0,3	0,6	1,0	1,8	3,0	2,8
	c								375	333	833	1059	1364	1077

\* Notice: a – number of population, mln. people; b – GDP output in prices of 1990, USD bln.; c – GDP per capita, in the USD in prices of 1990

Table 18.12

**Dynamics of the Buddhist Civilization\***

Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
1	7	8	8	8	6	10	47
300	7	8	8	8	6	10	47
500	8	7	9	10	6	10	48
800	7	8	9	10	5	9	48
1000	7	8	8	10	6	9	48
1200	7	9	8	10	7	10	51
1300	7	9	7	10	7	10	50
1400	6	9	7	11	7	10	50
1500	6	9	8	11	7	10	51
1600	7	10	9	12	9	11	58
1700	7	10	9	11	9	12	58
1750	7	10	8	11	10	13	59
1800	7	10	8	10	10	13	58
1820	6	10	8	10	9	12	55
1850	6	9	7	9	8	11	50
1870	6	9	7	9	7	11	49
1900	7	9	6	8	7	10	47
1913	7	9	6	8	7	10	47
1929	7	9	6	7	6	9	44
1938	7	9	6	7	6	9	44
1950	6	8	5	6	7	11	43
1970	6	7	8	9	11	10	51
1990	8	8	10	12	12	11	61
2000	9	8	10	13	12	12	64
2010 a	10	9	11	13	12	12	67
2010 b	9	9	11	13	11	11	64
2020 a	10	9	11	12	12	12	66
2020 b	9	8	10	12	10	10	59
2030 a	11	8	11	13	13	13	69
2030 b	8	7	9	11	9	9	53
2050 a	11	8	10	12	13	13	67
2050 b	7	6	8	10	8	8	47
2070 a	12	8	9	11	12	12	64
2070 b	7	9	7	9	8	8	48
2100 a	12	7	9	11	12	12	63
2100 b	7	6	7	8	7	7	42

\*Forecast: a – optimistic scenario, b – pessimistic

Under the optimistic scenario until the end of the 21<sup>st</sup> century it will remain approximately on the same level. However, a pessimistic scenario or closer to it is more real as many states of the Buddhist civilization have no sufficient intellectual and economic resources for mastering of the sixth technological order. If everything happens like that, then a technological level of their development will lower as well as the competitiveness of their products on the world markets that will tell adversely on their economic and socio-political position. Then the integral estimation will drop to 47 points by 2050 and to 42 points by 2100, the Buddhist civilization will find itself in the state of a deep-seated crisis.

### **18.3.6. Moslem Civilization**

This is a comparatively young and now most active, passionary civilization. It includes the states of the African and Eurasian continents. According to the UN's estimation in 1998 40 countries belonged to this civilization, the number of population made 982 mln. people; the largest of them — Indonesia (215 mln. people), Pakistan (148 mln.), Bangladesh (126 mln.), Egypt and Iran (68 and 66 mln.) and Turkey (71 mln.). According to the UN's forecast already 1,529 mln. people will live in these states by 2050 (most of all in Pakistan — 342 mln. people).

The major parameters of the dynamics of population and economy of the leading Moslem countries in the 20<sup>th</sup> c. are given in [table 18.13](#).

In the first half of the 20<sup>th</sup> c. the population increase rates were moderate in the Moslem countries, although exceeded world average (except Bangladesh), but they speeded up noticeably in the next decades. They slowed down only by the end of the 20<sup>th</sup> c. and apparently this tendency will also persist in the first half of the 21<sup>st</sup> c.

A share of the Moslem civilization in the world GDP in the first half of the 20<sup>th</sup> c. was relatively small; GDP growth rates nearly in all countries (except certain states of North Africa, Middle East — 4% for a half of the century against 2.2% of world average) were lower than world average. In the 50–70s the GDP increase rates speeded up considerably, which was brought about mainly by high prices for oil and other natural resources. However, in the 80–90s development of the Moslem countries slowed down, which became a cause of social tension. The aggression of the Moslem civilization

Table 18.13

**Indicators of Demographic and Economic  
Development of the Leading Moslem Countries  
in the 20<sup>th</sup> c.\***

Countries		1900	1913	1929	1938	1950	1960	1970	1980	1990	2000
North Africa, Middle East	a	30	40	55	75	100	135	180	223,5	300	370
	b		2,2	2,0	3,5	2,4	3,0	2,9	3,1	3,0	2,1
	c	25	40	65	100	175	420	870	1560	1930	2610
	d		3,7	3,1	4,9	4,4	9,1	7,6	6,0	2,0	3,2
	e	0,97	1,10	1,30	1,78	2,32	3,41	4,51	5,76	5,27	5,60
	f	0,8	1,0	1,2	1,3	2,3	3,4	4,5	7,0	6,3	7,1
Pakistan	a	70	24	25	29	35	48,5	61	82,3	114	135
	b		1,4	0,3	1,7	1,6	3,3	3,0	2,4	3,3	1,9
	c	20	25	28	32	40	52	86	145	260	325
	d		1,7	0,7	1,5	1,7	2,7	5,2	5,4	6,0	2,3
	e	0,77	0,69	0,56	0,57	0,53	0,42	0,45	0,53	0,72	0,70
	f	1,0	1,0	1,1	1,1	1,1	1,1	1,3	1,8	2,3	2,4
Bangladesh	a	30	32	35	39	42	54	68	87	107	137,5
	b		0,5	0,6	1,2	0,6	2,5	2,5	2,4	2,1	
	c	18	20	24	27	30	35	35	96	152	225
	d		0,8	1,1	1,3	0,8	1,6	1,6	4,3	4,7	4,0
	e	0,69	0,55	0,48	0,48	0,40	0,28	0,28	0,35	0,35	0,50
	f	0,4	0,6	0,7	0,7	0,7	0,6	0,6	1,1	1,1	1,6
Indonesia	a	40,5	48,5	6,0	68,5	77	98,5	124	148,5	184	210,5
	b		1,4	1,3	1,5	1,0	2,5	2,3	1,8	2,2	1,4
	c	30	36	60	75	85	115	170	375	640	720
	d		1,4	3,2	2,5	1,0	3,1	4,0	8,2	5,5	4,2
	e	1,16	0,99	1,20	1,33	1,13	0,93	0,78	1,38	1,78	1,50
	f	0,7	0,7	1,0	1,1	1,1	1,2	1,4	2,5	3,5	4,3

\*[133]

Notice: *a* – population, mln. people; *b* – average annual increase rates, %; *c* – GDP output, mln. USD in prices of 2000; *d* – average annual increase rates of a preceding period; *e* – share in the world GDP, %; *f* – GDP per capita, in thous. USD 1990 in prices of 2000

against the other world increased sharply. Unfortunately, everything indicates that in the first half of the 21<sup>st</sup> c. this tendency will persist and even intensify.

The Moslem civilization emerged in the 7<sup>th</sup> c. in a complex period of change of historical super cycles, world civilizations (from ancient to medieval), generations of local civilizations (from the 2<sup>nd</sup> to the 3<sup>rd</sup>), socio-cultural system (from sensual to ideational). And it formed not within space of developed civilization but within suffering a crisis phase civilization, on the edge of oecumene, in the Arabian Desert. The soil for the emergence of a new world religion – Islam – was well prepared and the result told immediately: neither Christianity, nor Buddhism disseminated so fast in the world.

The Moslem civilization transformed and included a number of ancient cultures — Egypt and North Africa, countries of the Middle East, a part of India, Malaysia, and Indonesia — in its area. Islam was embraced by the Golden Horde, the peoples of the Volga area, Caucasus, Asia Minor and even a part of Europe (the Pyrenees and the Balkans).

In the industrial period many Moslem countries became the colonies of the European powers, but they kept their belief and system of civilizational values. In the 20<sup>th</sup> c. they recovered their independence, their political weight increased. According to estimations of **S. Huntington** while in 1900 6.8% of the territory of the Earth and 4.2% of population was under political control of the Moslem civilization, then in 1920 — 3.5% of the territory and 2.4% of population, then by 1993–1995 — already 21.2% of the territory and 15.9% of population [259, p. 84–85].

Many Islamic states (except several countries oil exporters) are included in the poor countries, which under conditions of high birth rates causes aggression, hatred for the rich countries and civilizations. Social and religious roots of terrorism, causes for the emergence of dozens of Shakhids, who consciously face death for the sake of destroying «unbelievers», lie here.

Let's turn to quantitative estimations of dynamics of the Moslem civilization for all period of its existence (*table 18.14* and *fig. 18.8*).

Beginning from a relatively low starting position (integral estimation of 51 points in 800, technological level — 7, natural-ecological — 7), Moslem civilization rose this position already to 68 points by 1200, and sharply increased the significance of technological, economic and natural-ecological factors (mainly, through conquering of more developed countries and civilizations). Having somewhat lost positions in the clash with the Mongolian civilization, the Moslem civilization renewed its stable growth and reached a historical maximum of 68 points in 1600. Then stagnation began, the countries of Islam were turned into the colonies of the European powers, and their integral indicator fell to 46 points due to that in 1900 and to 49 — in 1950 (the consequences of World War II told).

In the post-war period after recovering independence these states speeded up their growth again and reached the integral indicator of 66 points by 2000. Oil reserves of the countries of the Persian Gulf and Iran played a significant role in this.

However, in the 21st c. such level is unlikely to be maintained even under an optimistic scenario (the decline of the integral

Table 18.14

**Estimation of Dynamics of the Moslem Civilization \***

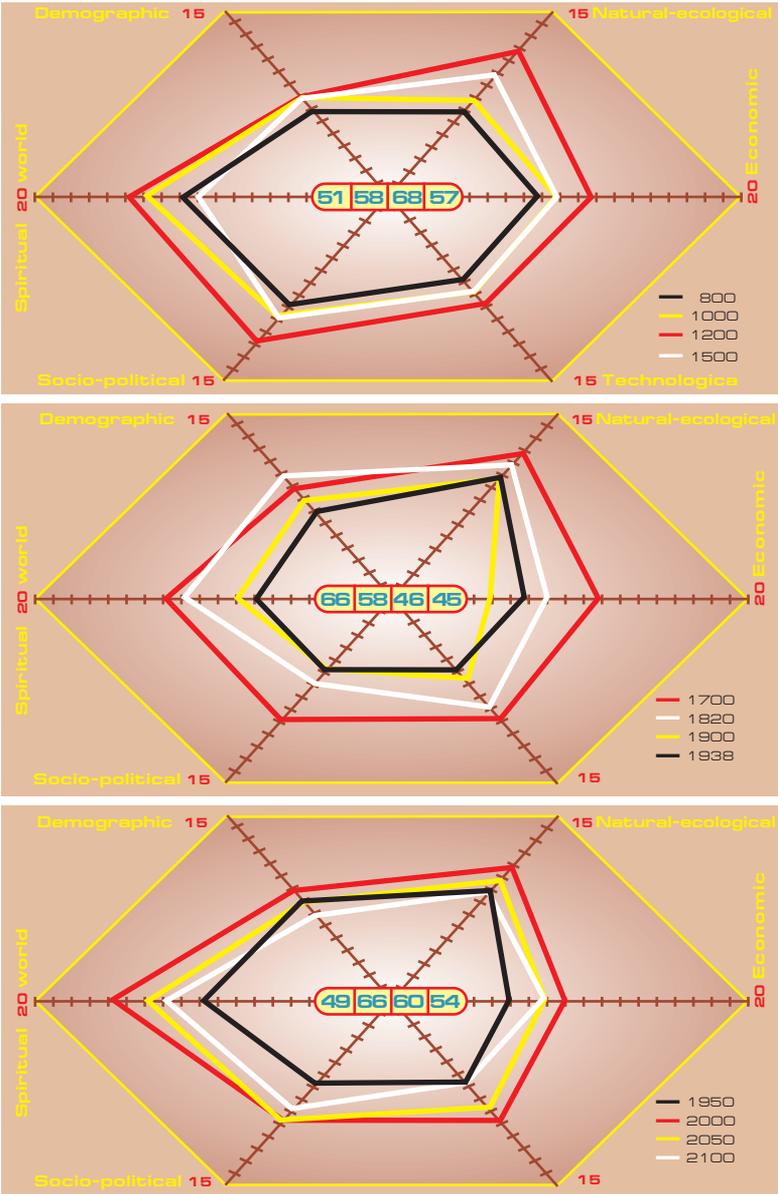
Years	Factors						Integral estimation
	Demo-graphic	Natural-ecological	Techno-logical	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
800	7	7	7	9	9	12	51
1000	8	8	8	10	10	14	58
1200	8	12	9	12	12	15	68
1300	7	11	8	11	11	14	62
1400	8	11	8	12	10	13	62
1500	8	10	8	10	10	11	57
1600	9	12	10	13	10	14	68
1700	9	12	10	12	10	13	66
1750	10	12	10	11	9	14	66
1800	10	12	10	10	8	12	62
1820	10	11	9	9	7	12	58
1850	9	11	8	8	6	12	54
1870	8	10	7	7	6	10	48
1900	8	10	7	6	6	9	46
1913	8	10	7	7	6	9	47
1929	8	10	7	7	5	9	46
1938	7	10	6	8	6	8	45
1950	8	9	7	7	7	11	49
1970	9	10	8	8	8	12	55
1990	10	11	9	9	9	14	62
2000	9	11	10	10	10	16	66
2010 a	9	11	10	10	11	16	67
b	8	10	9	9	10	15	61
2020 a	9	11	10	10	12	15	67
b	7	9	9	9	9	14	57
2030 a	8	10	9	9	10	14	60
b	7	8	7	8	8	13	51
2050 a	8	10	9	9	10	14	60
b	6	8	7	8	9	12	50
2070 a	7	9	8	9	9	13	55
b	5	7	6	7	7	11	43
2100 a	7	9	7	9	9	13	54
b	5	6	5	6	6	9	37

\*Forecast: a – optimistic scenario, b – pessimistic

Figure 16.8

**Estimation of Dynamics of the Moslem Civilization Based on the Geocivilizational Matrix**

Estimation in points according to the factors, the integral estimation in the center



indicator to 60 points in 2050 and 54 points in 2100). If the situation proves to be unfavorable, then the integral estimation will make only 50 and 37 points, respectively, which will indicate a protracted crisis of the Moslem civilization. Several factors contributing to such fall may be mentioned: a fast increase of the population number, a high level of the unemployment; depletion of oil and gas reserves, a fall of demand for it in the second half of the 21<sup>st</sup> c. in connection with the development of hydrogen power and other alternative sources of power; decline in the technological level and competitiveness of local products due to a too late assimilation of the sixth and seventh technological orders; a possible disintegration of the Moslem civilization in the second half of the 21<sup>st</sup> c.; a threat of the clash with other civilizations (for instance, India and Pakistan because of Kashmir); aggravation of cross-national and cross-confessional conflicts as a reaction of all the world to a wave of terrorism. It should be taken into account that in the most conflicts of the end of the 20<sup>th</sup> – beginning of the 21<sup>st</sup> c. one of the sides were the Moslems (wars in Lebanon, Afghanistan, Bosnia, Chechnya, terrorist attacks in the USA, Madrid, London, Moscow, protracted Palestinian-Israeli conflict etc.).

### **18.3.7. Mongolian Civilization**

Before casting up a total estimation of development of the countries of Asia, let's dwell in brief on the history of a short-life Mongolian civilization. It formed at the beginning of the 13<sup>th</sup> c. based on the union of stock-raising tribes that were on the early civilizational stage of development. In short time in terms of history through the efforts of Genghis Khan and his successors (Genghisids) the world empire that embraced the most part of Eurasia emerged again on the map of the world. It is possible to speak about a mixed civilization of the 3<sup>rd</sup> generation which embraced, but not assimilated other cultures of Eurasia and left the historical scene in the 16<sup>th</sup> c. This civilization was not homogeneous by its composition: its south-eastern part blended with the Chinese civilization (the Yuan dynasty), Western part (Golden Horde) – with Moslem (and it produced a considerable influence on the Eastern Slavic (future Eurasian civilization); Buddhism (Lamaism) established itself in the central part (today's Mongolia).

Table 18.15

**Dynamics of the Mongolian Civilization**

Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
1200	8	9	5	7	6	6	41
1300	10	10	7	11	12	8	58
1400	10	11	10	14	13	10	68
1500	9	10	10	13	12	9	63
1600	8	9	7	8	6	7	45

A Delphi estimation of a life cycle of the Mongolian civilization (*table 18.15*) shows a rapid growth of the integral indicator and the same rapid fall.

**18.3.8. African Civilization**

Let's turn now to the estimations of the African civilization. It includes the states of the African continent found to the south of the Sahara as North Africa made a part of the Moslem civilization already in the 7<sup>th</sup> c. Only with a certain way of conditionality it is possible to speak that the countries of Central and South Africa make a single local civilization of mixed type. Here by the beginning of the early industrial period the seats of civilizational development did not reach the level of local civilizations and were destroyed by the European colonialists and American slave-merchants. Africa was divided between colonial empires — British, French and Portuguese. A kind of the enclave of the western civilization formed in South Africa.

The African civilization found socio-cultural integrity only in the second half of the 20<sup>th</sup> c. when the states of the Black continent recovered independence, consolidated ties with each other, understood the community of its economic and geopolitical interests. However, everything is not that simple: the countries with various level of economic and socio-cultural development make the African civilization. This is rich South Africa, and such poor countries as Ethiopia, Mozambique and the Republic of Chad.

National and confessional composition of this civilization is also quite mixed.

The estimation of its dynamics for the elapsed century and a half and for an outlook to 2050, which is given in *table 18.16*, shows that for the first decades after it recovered independence the Black Continent developed at comparatively high rates, its integral estimation increased from 42 to 54 points. It may be partly explained by the fact that many countries of Africa got considerable support of the USSR after they had taken (verbally or actually) the socialist path of development. When the socialist bloc disintegrated, these states found themselves in the state of stagnation, their economic situation worsened considerably. A wave of armed cross-state and cross-tribal conflicts rolled throughout Africa (Ethiopia – Somali, Rwanda – Burundi, Ghana – Sierra Leone, Sudan etc.); the integral estimation of civilization fell to 49 points by the end of the century.

According to the forecast under an optimistic scenario provided that developed countries and all international society renders an efficient assistance to the countries of Africa in the development of systems of education, support with power, improvement of their technological level, if armed conflicts cease, then the integral indicator will rise to 52 points by the end of the century.

However, if the present tendencies persist, i.e. degradation of these countries continues, then their integral estimation will drop to a catastrophically low level – 34 points by 2050 and 29 points by 2100. And the major constraining factor will be demographic (a fall of estimation from 6 to 5 points). In view of a rapid growth of the population number, spread of AIDS, environmental pollution one can understand that a civilizational crisis that has started in Africa will assume a planetary nature and will threaten the whole humankind. Therefore a major task of the world community for the nearest decades is to prevent a catastrophic development of events on the African continent.

### **18.3.9. Summary Estimation of Civilizations of Asia and Africa**

In *table 18.17* a summary estimation of integral indicators by civilizations of Asia and Africa is given.

In the first centuries of our era the civilizations of Asia (Indian and Chinese) along with the Greco-Roman civilization were the leaders in a geocivilizational space. Therefore their integral estima-

Table 18.16

**Dynamics of the African Civilization\***

Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
1950	7	9	6	6	7	7	42
1970	8	9	7	9	10	11	54
1990	9	8	7	7	9	10	50
2000	9	8	7	6	9	10	49
2010 a	8	8	7	6	9	11	49
b	7	8	6	5	8	10	44
2020 a	8	8	7	6	9	11	49
b	6	7	6	5	7	9	40
2030 a	7	7	7	5	10	11	47
b	6	6	5	4	7	8	36
2050 a	6	6	7	6	10	12	47
b	5	5	5	4	7	8	34
2070 a	6	6	8	7	11	13	51
b	5	5	5	4	6	7	32
2100 a	6	6	8	7	12	13	52
b	5	4	4	3	6	7	29

\*Forecast: a – optimistic scenario, b – pessimistic

tion is quite high (67 points). However, the emergence of Japanese, Buddhist and Moslem civilization in this space with low starting points lowered a summary estimation to 59 points by 800. In the industrial period after the countries of Asia became colonies and semi-colonies lost their previous positions and their integral summary dropped to 48 points in 1950.

With the recovery of independence the revival of Asian and to a less extent African civilization began: their summary estimation rose to 65 points in 2000 due to Chinese (78 points), Indian, Japanese, Buddhist and Moslem civilizations (64-69 points). The African civilization is in the crisis state (49 points).

In the 21<sup>st</sup> c. even under a favorable development of events the position of civilizations of Asia and Africa will worsen under pressure of demographic and natural-ecological factors. A summary estimation will drop from 67 points in 2010 and to 64 points in 2050 and to 62 in 2100 (including the estimation of the Chinese civilization – from 80 to 71 and 65 points). Under a pessimistic scenario if

Table 18.17

**Dynamics of Civilizations of Asia and Africa \***

Years	Civilization							Number of civilization	Amount	Summary estimation	
	Indian	Chinese	Japanese	Buddhist	Moslem	Mongolian	African				
1		76	76		47				3	199	66
300		76	79		47				3	202	67
500		73	77	41	48				4	239	60
800		68	79	48	48	51			5	294	59
1000		70	79	50	48	58			5	305	61
1200		70	80	54	51	68	41		6	364	61
1300		74	75	56	50	62	58		6	375	63
1400		74	70	57	50	62	68		6	381	64
1500		74	71	58	51	57	63		6	374	62
1600		75	74	59	58	68	45		6	379	63
1700		74	74	57	58	66			5	329	66
1750		68	73	56	59	66			5	322	64
1800		61	71	54	58	62			5	306	61
1820		56	70	51	55	58			5	290	58
1850		52	61	49	50	54			5	266	53
1870		47	58	54	49	48			5	256	51
1900		45	56	63	47	46			5	257	51
1913		48	53	67	47	47			5	262	52
1929		54	53	67	44	46			5	264	53
1938		50	48	66	44	45			5	253	51
1950		57	49	48	43	49		42	6	288	48
1970		60	60	63	51	55		54	6	343	57
1990		62	69	74	61	62		50	6	378	63
2000		64	78	69	64	66		49	6	390	65
2010	a	68	80	69	67	67		49	6	400	67
	b	60	74	63	64	61		44	6	366	61
2020	a	70	81	68	66	67		49	6	401	67
	b	59	72	59	59	57		40	6	346	58
2030	a	72	77	66	69	60		47	6	391	65
	b	54	66	55	53	51		36	6	315	52
2050	a	75	71	65	67	60		47	6	385	64
	b	52	57	51	47	50		34	6	291	48
2070	a	79	67	64	64	55		51	6	380	63
	b	49	51	45	48	43		32	6	268	45
2100	a	78	65	62	63	54		52	6	374	62
	b	45	45	44	42	37		29	6	242	40

\*Forecast: a – optimistic scenario, b – pessimistic

the problem of a technological breakthrough is failed to be solved as well as competitiveness of local products, a summary estimate might fall to 48 points in 2050 and to 40 in 2100; then civilizations of Asia and Africa will found themselves in the state of a protracted and deep-seated crisis.

## **18.4. Measurement of Civilizational Dynamics of America and Oceania<sup>1</sup>**

### **18.4.1. Tendencies of Dynamics of Civilizations of America and Oceania**

The cliometric measurements of dynamics of civilization in America and Oceania have been made by three groups of cultures:

➡ Pre-Columbian civilizations of the 1<sup>st</sup> and 2<sup>nd</sup> generations of Meso-America and the Andes region which developed in isolation from civilizations of Eurasia and had their own specifics both in the rhythms of cyclical dynamics and in the periods of development of phases of civilizational cycles;

➡ North American and Latin American civilization arisen in place of those destroyed by an aggressive western European civilization of the 3<sup>rd</sup> generation of the Pre-Columbian and pre-civilizational societies of North and South America (including the Caribbean islands). Originally the north American and Latin American civilizations emerged like colonies of Spain, Portugal, Great Britain and France, but after a series of revolutions and wars, they became independent players on the geopolitical arena, and in the 20<sup>th</sup> c. they formed into independent local civilizations of the last stage of the 4<sup>th</sup>— beginning of the 5<sup>th</sup> generations. **A. Toynbee** and some other historians of civilizations included all US territories (even Oceania) in the composition of a single western civilization [191]. **S. Huntington** thinks differently: he separates Latin American civilization from Western, but includes North America into the latter [259];

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<sup>1</sup> The section (in part of the inquiries into dynamics of development of the American continent) is written based on the materials courteously provided by Doctor of Economy Prof. **Ya. G. Shemyakin** (Institute for Latin America and the USA), and also using the question forms completed by Doctor of Physics and Mathematics Academician of the Russian Academy of Natural Sciences **L.V. Leskov**, Doctor of Economy, Prof., Corresponding Member of the Russian Academy of Natural Sciences **O.I. Malikova**, Candidate of Economy **L.M. Mironov** and Candidate of Economy **A.N. Vyalkova**.

➡ civilization of Oceania which includes Australia and New Zealand on a modern level development, and also New Guinea and numerous pocket states of this region, a part of which is at the early civilizational stage of development.

We believe that already at the end of the 20<sup>th</sup> c. at the closing stage of a life cycle of local civilizations of the 4<sup>th</sup> generation, daughter civilizations – North American (the USA and Canada), Latin American (states of Latin America and the Caribbean basin) and Oceanic (Australia, New Zealand, states of Polynesia, Micronesia and Melanesia) began to bud off from the parent western European civilization.

The tendencies of dynamics of population and economy of America and Oceania are given in [table 18.18](#). (Canada, Australia and New Zealand are included in other western enclaves).

As it follows from the table, America and Oceania occupied an inconsiderable share in the total number of population on the Earth and world GDP output for the first millennium and a half of our era; their share in population grew from 2.9% in the year 1 to 5.3% in 1000.

Ancient American civilization on the territory of today's Latin America developed at comparatively high rates in the 1<sup>st</sup> millennium A.D. (higher than cultures of the Old World) both by population and GDP. After colonization of America and destruction of pre-Columbian civilization the population number of the continent also declined sharply (from 19.5 mln. people in 1500 to 10.1 mln. in 1600 – nearly twice) and GDP output (from 8.1 bln. USD to 4.4 bln. – nearly twice). The flow of colonists from Europe only partially replenished the losses. However, in the 18<sup>th</sup>–19<sup>th</sup> c. the priority growth of both indicators began so by the end of the period the USA and Latin America occupied 13.3% in the number of residents on the planet and 30.8% in the world GDP output.

From the end of the 19<sup>th</sup> c. the North American civilization took the leading positions in the world, by GDP per capita and in 4.5 times exceeded a world average level. Shares of Latin America increased considerably also in the population of the world (from 2.1% in 1820 to 8.6% in 2001) and in the volume of world GDP (from 2.2% to 8.3% for the same period), however, by such indicators as GDP per capita it considerably lags behind the USA, and in the 20<sup>th</sup> c. it varies near the world average level.

As for other enclaves of the western European civilization (Canada, Australia and New Zealand, Oceania), the consequences of

Table 18.18

### Demographic and Economic Dynamics of Civilizations of America and Oceania \*

Countries, regions		1	1000	1500	1600	1700	1820	1870	1913	1950	1973	2001
<b>Population</b>												
Latin America	a	5,6	11,4	17,5	8,6	12,0	21,7	40,4	80,9	165,9	308,4	531,2
	b	2,4	4,3	4,0	1,5	2,0	2,1	3,2	4,5	6,6	7,9	8,6
	c		0,07	0,09				0,07	1,25	1,63	1,96	2,73
USA	a	0,5	1,3	2,0	1,5	1,0	10,0	40,2	97,6	152,3	211,9	285
	b	0,3	0,5	0,5	0,3	0,2	1,0	3,2	5,4	6,0	5,4	4,6
	c		0,06	0,09				0,50	2,83	2,08	1,21	1,45
Other western enclaves	a	0,5	0,7	0,8	0,8	0,8	1,2	5,8	13,8	21,2	38,9	54,9
	b	0,2	0,2	0,2	0,1	0,1	0,1	0,5	0,8	1,0	1,0	0,9
	c		0,05	0,07				0,44	2,86	2,07	1,25	1,54
<b>GDP</b>												
Latin America	d	2,2	4,6	7,3	3,8	6,3	15,0	27,5	119,9	415,9	1389	3087
	e	2,2	3,9	2,9	1,1	1,7	2,2	2,5	4,4	7,8	8,7	8,3
	f		0,07	0,09			0,13	0,22	3,48	3,42	3,38	2,89
	g	400	400	416	438	527	692	681	1481	2506	4504	58,196
USA	h	90	92	73	78	86	104	78	97	119	110	
	d	400	400	0,8	0,6	0,5	12,5	981	517,4	456	3537	3966
	e			0,3	0,2	0,1	1,8	8,8	18,9	27,3	22,1	21,4
	f						0,86	4,20	3,94	2,84	3,93	2,94
Other western enclaves	g			400	400	527	1257	2445	5301	9561	16 689	27 948
	h			71	67	86	188	279	348	453	408	462
	d			0,3	0,3	0,3	1,0	13,1	65,6	179,0	522	9,56
	e			0,1	0,1	0,1	0,1	1,2	2,4	3,4	3,3	3,2
Other western enclaves	f						0,34	5,39	3,81	2,76	4,75	2,99
	g			400	400	400	761	2245	4732	7425	13 309	21 718
	h			71	67	66	114	257	392	352	328	359

<sup>1</sup>[264]

Notice: *a* – population, mln. people; *b* – % to the world; *c* – average annual increase rates in the preceding period; %; *d* – GDP output, USD mln. 1990; *e* – share in the world GDP, %; *f* – GDP average annual increase rates in the preceding period; *g* – GDP per capita, USD 1990; *h* – to the world, %

colonization were not as destructive as both in Central and South America. But they second a little to the USA by the level of economic development, and exceed the level of Latin America several times.

A share of Canada, Australia, New Zealand and Oceania in the total number of the population of the world and GDP is not high, but these regions are remarkable for their high level of economic development (in the 20<sup>th</sup> c. their GDP per capita is 3.1 – 3.6 times higher than the world average level).

### 18.4.2. Pre-Columbian Civilizations

The history of emergence and development of pre-Columbian civilizations of America is addressed in detail in paragraph 11.3.5. of this work. The estimation of their dynamics is given in *table 18.19*.

**Ya.G. Shemyakin** differentiates the pre-Columbian civilizations of Meso-America and the Andes regions where the latter by his estimate achieved a higher level of development: the range of estimations for a decade and a half – 44–58 points to 37–44 by civilizations of Meso-America (*see table 18.19*).

Table 18.19

#### Dynamics of the Pre-Columbian Civilizations of America

Years	Factors						Integral estimation
	Demo-graphic	Natural-ecological	Techno-logical	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
<b>Pre-Columbian Civilizations of the Andes Region</b>							
1	9	10	7	7	4	7	44
300	11	11	8	8	4	7	49
500	12	11	8	8	4	7	50
800	10	8	8	7	5	7	45
1000	13	13	8	8	5	7	54
1200	14	14	8	9	6	6	57
1300	14	14	8	9	6	6	57
1400	14	14	8	9	7	6	58
1500	14	14	8	9	7	6	58
<b>Pre-Columbian Civilizations of Meso-America</b>							
1	8	8	4	5	4	8	37
300	10	8	4	6	4	10	42
500	10	8	5	6	5	10	44
800	10	8	5	6	4	10	43
1000	6	5	6	7	5	6	35
1200	10	8	6	7	3	6	40
1300	10	9	6	7	5	6	43
1400	10	10	6	7	6	6	45
1500	10	10	6	7	5	6	44

\*Forecast: *a* – optimistic scenario, *b* – pessimistic

All pre-Columbian civilizations (except small relicts in Central and South America) were intentionally destroyed by the aggressive Western European civilization in the 16<sup>th</sup> c. This is one of the greatest tragedies in the history of humankind. In the 16<sup>th</sup>–19<sup>th</sup> cc. colonies of Western European powers sprang up in their place, and in the 20<sup>th</sup> c. independent civilizations – North American and Latin American – were formed.

### **18.4.3. North American Civilization**

In *table 18.20* and *fig 18.9* a Delphi estimation of dynamics of the North American civilization is given, the year 1600 is taken as a reference point for countdown of the history. It is exactly when such lands were more or less developed by the emigrants from Western Europe who destroyed or ousted local tribes on a pre-civilizational stage of development to reservations; the prehistory of the North American civilization began and completed the process of its formation only by the end of the 20<sup>th</sup> c.

In the 17<sup>th</sup>–19<sup>th</sup> cc. the number of population of North America increased fast because of the influx of emigrants from Europe, and in the 20<sup>th</sup> c. – from Latin America and Asia (Japan, China) as well.

The estimation of a socio-political factor after the end of war for independence and civil war between the North and the South was stably high (it somewhat fell only during the crisis of 1929–1933). The indicators of spiritual life also gradually grew, the North American civilization managed to combine fast and harmoniously spiritual values of representatives of a mix of cultures. Nevertheless, the summary estimation of its spiritual sphere was lower than the same indicators of the Western European, Chinese, Indian and Eurasian civilizations.

In the 21<sup>st</sup> c. two variants of dynamics of the North American civilization are possible. Under favorable conditions it will keep technological and economic leadership in the world, its socio-political and spiritual spheres will develop stably, although the estimation of demographic and natural-environmental factors will somewhat drop. However, another, pessimistic scenario should not be excluded, when the North American civilization that is at the meridian of its life cycle will loss certain positions in the humanistically noospheric post-industrial society, its integral estimation will fall from 80 points in 2000 to 56 in 2050 and to 52 in 2100. However, this loss will not be catastrophic; in any case the North American civilization will remain one of the leading in a geocivilizational space.

Table 18.20

**Dynamics of the North American Civilization \***

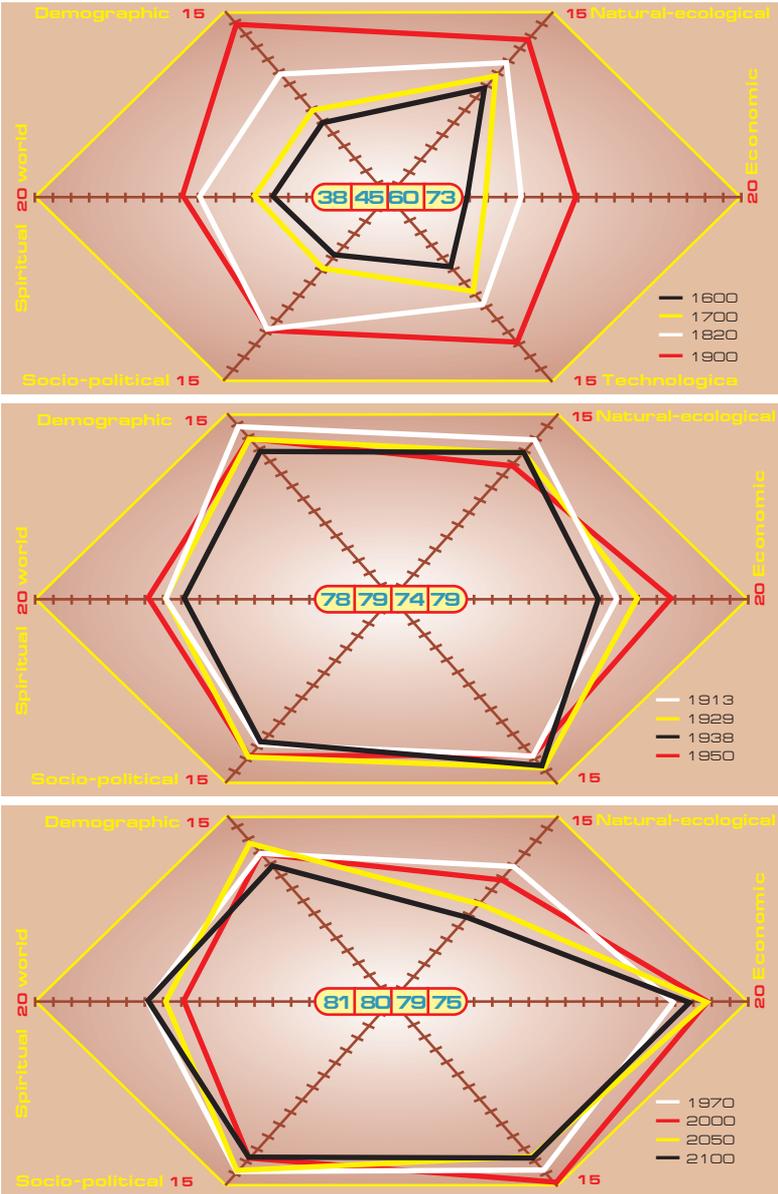
Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
1600	6	9	6	5	5	7	38
1700	7	10	8	6	6	8	45
1750	8	10	8	7	8	9	50
1800	9	11	9	8	10	10	57
1820	10	11	9	8	11	11	60
1850	11	12	10	9	11	11	64
1870	13	12	11	10	11	12	69
1900	14	13	12	11	11	12	73
1913	14	13	13	13	12	13	78
1929	13	12	14	14	13	13	79
1938	12	12	14	12	12	12	74
1950	13	11	13	16	13	13	79
1970	12	11	14	16	14	14	81
1990	12	11	14	17	13	14	81
2000	12	10	15	18	13	12	80
2010 a	12	10	15	18	13	12	80
b	11	8	14	17	12	11	73
2020 a	13	9	15	18	13	12	80
b	9	7	13	16	11	10	66
2030 a	13	8	14	19	13	13	80
b	10	7	12	15	10	10	64
2050 a	13	8	13	18	14	13	79
b	8	6	10	13	10	9	56
2070 a	12	8	14	14	14	15	77
b	8	5	9	12	10	9	53
2100 a	11	7	13	17	13	14	75
b	8	5	9	12	9	9	52

\*Forecast: a – optimistic scenario, b – pessimistic

Figure 18.9

**Estimation of Dynamics of the North American Civilization Based on the Geocivilizational Matrix**

Estimation in points according to the factors, the integral estimation in the center



### 18.4.4. Latin American Civilization

The formation of the Latin American civilization which is far behind North American by technological and economic factors is of another nature. It remained politically split for a long period and was the object of exploitation on the part not only of Western Europe, but the USA. The estimation of dynamics of this civilization is given in *table 18.21*.

Table 18.21  
**Dynamics of the Latin American Civilization\***

Years	Factors						Integral estimation
	Demographic	Natural-ecological	Technological	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
1600	6	10	5	6	4	5	36
1700	7	11	6	7	4	6	41
1750	8	11	6	8	5	7	45
1800	8	11	7	10	5	7	48
1820	9	12	7	11	6	8	53
1850	10	12	8	12	8	8	58
1870	10	12	8	12	9	9	60
1900	11	13	9	13	10	9	65
1913	12	13	9	13	10	10	67
1929	12	13	9	14	11	10	69
1938	12	13	9	13	11	10	68
1950	13	14	10	14	10	11	72
1970	13	14	10	15	10	12	74
1990	12	14	10	16	10	12	74
2000	12	14	10	16	11	12	75
2010 a	12	14	9	16	12	12	75
b	11	13	9	15	11	12	71
2020 a	12	14	9	15	12	13	75
b	10	13	8	14	11	11	67
2030 a	11	13	9	15	13	15	76
b	9	12	7	13	10	12	63
2050 a	11	12	9	15	12	15	74
b	9	11	7	12	10	11	60
2070 a	11	11	8	14	11	16	71
b	9	9	6	11	9	11	55
2100 a	10	10	8	13	11	15	67
b	8	8	6	10	8	10	50

\*Forecast: a – optimistic scenario, b – pessimistic

Only natural-ecological (10) may be viewed as favorable of all factors of the formation of Latin American civilization, therefore its starting integral indicator was quite low (36 points in 1600). But it developed fast further on and reached its peak in the 20<sup>th</sup> c. (65 points in 1900, 72 in 1950, 75 in 2000). In the 21<sup>st</sup> c. a period of decline will begin. Even if the optimistic scenario is implemented, the integral estimation of this civilization will fall to 74 points in 2050 and 67 points in 2100. Under a pessimistic scenario this indicator will not exceed 60 and 50 points, respectively. The reason for that is worsening of natural-ecological (disafforestation of the Amazon basin), demographic (high population increase rates), technological and economic factors. Nevertheless, under both scenarios the position of Latin America will become a little better in a geocivilizational space.

#### **18.4.5. Civilizations of Oceania**

Colonization of Australia, New Zealand and neighboring islands began only from the end of the 18<sup>th</sup> c. At the beginning of the last century Australia and New Zealand got the status of the dominions of the British Empire, their head is formally Her Britannic Majesty to this day. After World War II many small states sprang up on the islands of Polynesia, Melanesia and Micronesia, the population of which was at the stage of pre-civilizational development. In 2000 the number of residents of the states of Melanesia made 7 mln. people (according to the UN's forecast, it will increase to 14 mln. by 2050); Micronesia — 0.5 mln (a growth up to 0.9 mln.); Polynesia — 0.6 mln. (a growth to 0.9). Although the UN views Oceania as an independent formation in its demographic forecasts, but it is premature to speak that a full-fledged local civilization has formed here. Nevertheless, this region is incorrect to include in the composition of Western European or any other civilization. From the viewpoint of outlooks of formation of the 5<sup>th</sup> generation of local civilizations it is possible to speak about the existence of the Oceanic civilization (maybe a proto-civilization at the present stage) of a mixed type. It includes quite heterogeneous elements in it. On the one hand, these are highly developed Australia (the nucleus of civilization) and New Zealand technologically, economically, in terms of nature and ecology and socio-culturally. In 2002 a share of these countries in the total population of the world made 0.38%, and in the world

GDP output – 1.41%. On the other hand, these are the states of the rest of Oceania which are characterized by a low level of economic development and high rates of population increase.

The quantitative estimation of dynamics of the Oceanic civilization beginning from the 19<sup>th</sup> c. is given in *table 18.22*.

In the 19<sup>th</sup> c. in the period of colonization all factors, except natural-geographical got a low estimation; the resultant integral indicator was still very low although it grew from 28 points in 1820 to 35 in 1870.

Table 18.22  
**Dynamics of Civilizations of Oceania \***

Years	Factors						Integral estimation
	Demo-graphic	Natural-ecological	Technolo-gical	Economic	Socio-political	Spiritual world	
Maximum estimation in points	15	15	15	20	15	20	100
1820	6	7	4	3	3	5	28
1850	5	7	5	4	4	6	31
1870	6	8	5	5	5	6	35
1900	7	8	6	7	7	7	42
1913	7	9	7	8	9	8	48
1929	7	9	8	8	10	8	50
1938	8	10	9	9	10	9	55
1950	8	10	10	11	11	10	60
1970	8	11	11	13	12	12	67
1990	9	11	12	15	13	14	74
2000	9	11	12	16	13	16	77
2010 a	10	11	12	17	13	16	79
b	9	10	11	16	12	15	73
2020 a	10	10	12	17	14	16	79
b	9	9	10	15	11	15	69
2030 a	10	10	12	17	14	17	80
b	8	9	9	14	11	14	65
2050 a	9	10	13	16	13	17	78
b	7	8	9	13	10	13	60
2070 a	8	9	12	15	13	16	73
b	7	7	8	12	9	12	55
2100 a	8	9	12	15	13	16	73
b	7	7	9	11	8	12	54

\*Forecast: a – optimistic scenario, b – pessimistic

The 20<sup>th</sup> century became a period of fast industrial development of Australia and New Zealand. Their rich natural resources began to be involved in the turnover; a technological and economic rise was obvious. As a result the integral estimation grew from 42 points in 1900 to 60 in 1950 and 77 in 2000 (although the level of development of small states of Oceania remained low).

In the 21<sup>st</sup> c. (under an optimistic scenario) the position of the Oceanic civilization will remain stable; the integral indicator will rise to 78 points by 2050, but it will fall to 73 points by the end of the century due to a certain worsening of demographic and natural-ecological factors. Under a pessimistic scenario the integral estimation will fall to 60 points by 2050 and 54 in 2100 — a too late assimilation of the sixth and seventh technological orders will tell, economy of the states of the oceanic civilization will suffer.

#### **18.4.6. Summary Estimation of Dynamics of Civilizations of America and Oceania**

The data referred to above permit to measure dynamics of civilizations of America and Oceania in general and evaluate the opportunities of their development in the 21<sup>st</sup> c. (*table 18.23.*).

The pre-Columbian civilizations lagged behind in its development from European because of their isolation, nevertheless the first millennium and a half of our era they progressed. Thus, the civilizations of the Andes region reached the integral estimation of 57–58 points in the first half of the 2<sup>nd</sup> millennium A.D. But they were destroyed by the western European civilization by 1500 and vanished nearly totally from the surface of the globe.

It is exactly why the original level of civilizational development of colonial possessions of Europe and America turned to be so low (37 points in 1600). However, in the early industrial and especially in the industrial period they gathered strength fast. By the end of the 19<sup>th</sup> c. the North American civilization found itself in the vanguard of the world progress (estimation of 73 points) and consolidated its position even more after World War I and II which opened new markets to it. Also, the positions of Latin America and Australia strengthened, and their lagging from North America was gradually bridging over. In 2000 the following relation of the inte-

Table 18.23

**Summary Measurement of Dynamics of Civilizations of America and Oceania\***

Years	Pre-Columbian Civilizations		North American	Latin American	Oceanic	Total		
	Meso-American	Region of Andes				Number of Civilizations	Summarized Estimation	Combined Index
300	42	49				2	91	46
500	44	50				2	94	47
800	43	45				2	88	44
1000	35	54				2	89	44
1200	40	57				2	97	48
1300	43	57				2	100	50
1400	45	58				2	103	52
1500	44	58				2	102	51
1600			38	36		2	74	37
1700			45	41		2	86	43
1750			50	45		2	95	47
1800			57	48		2	105	52
1820			60	53	28	3	141	47
1850			64	58	31	3	153	51
1870			69	60	35	3	164	55
1900			73	65	42	3	180	60
1913			78	67	48	3	193	64
1929			79	69	50	3	198	66
1938			74	68	55	3	197	66
1950			79	72	60	3	211	70
1970			81	74	67	3	222	74
1990			81	74	74	3	229	76
2000			80	75	77	3	232	77
2010	a		80	75	79	3	234	78
	b		73	71	73	3	217	72
2020	a		80	75	79	3	234	78
	b		66	67	69	3	202	67
2030	a		80	76	80	3	236	79
	b		64	63	65	3	192	64
2050	a		79	74	78	3	231	77
	b		56	60	60	3	176	59
2060	a		77	71	73	3	221	74
	b		53	55	55	3	163	54
2100	a		75	67	73	3	215	72
	b		52	50	54	3	156	52

\*Forecast: *a* – optimistic scenario, *b* – pessimistic

gral estimation formed: North America — 80 points, Latin America — 75 and Oceania — 77. This group of civilizations leads in the dynamics of the global civilization.

Under an optimistic scenario such situation will persist to the end of the 21<sup>st</sup> c., although a summary estimation of this group will drop to 72 points, mainly under the impact of natural-ecological and demographic factors (depletion of oil reserves and deforestation, worsening of ecology, high growth rates of population). Under a pessimistic scenario the impact of such factors will be even more noticeable, especially on the Latin American and Oceanic civilizations. Their integral estimation may be dropped to 52 points. However, the leadership of the Northern American civilization is likely to persist.

### **18.5. Summary Integral Estimation of Civilizational Dynamics of the World**

Having made inquiries into each local civilization and their groups for two millennia in retrospect and for 100 years in prospect let's deduce a summary estimation of their development by comparing integral indicators by their groups: civilizations of Europe and North of Eurasia (Greco-Roman, Byzantine, Western European, Eastern European and Eastern Slavic — Eurasian); America and Oceania (pre-Columbian Meso-American and Andes, Northern American, Latin American and Oceanic); Asia and Africa (Indian, Chinese, Japanese, Buddhist, Moslem, Mongolian and African). This will allow us to identify the rhythm of the global civilization in change of historical super cycles, world civilizations and generations of local civilizations.

In [table 18.24](#). the statistics are given (based on **A. Maddison's** data) of dynamics of population and GDP of the world for two millennia. Although during the first millennium and a half the framework of civilizations extended not to the entire globe; nevertheless most population of the world was embraced by local civilizations.

More detailed data for the 20<sup>th</sup> c. are given in [table 18.25](#).

Analyzing the data of these two tables the following conclusions may be made on the tendencies of dynamics of the global civilization.

1. The first millennium and a half of our era — before the beginning of the early industrial period — was characterized by low rates

Table 18.24

**Demographic and Economic Dynamics of the Global Civilization \***

Data		0	1000	1500	1600	1700	1820	1870	1913	1950	1973	2001
<b>Population of the World</b>	a	230	267	436	556	603	1042	1272	1791	2524	3916	6149
	b		0,01	0,10			0,27	0,40	0,80	0,93	1,93	1,62
<b>World GDP</b>	c	103	117	248	330	371	695	1113	2732	5330	16 024	37 194
	d		0,01	0,15			0,32	0,93	2,11	1,82	4,90	3,05
	e	445	430	566	595	615	667	875	1525	211	4091	6049
	f		0,00	0,05			0,05	0,54	1,30	0,88	2,92	1,43

\* [264, p. 256–257, 259–260]

*Notice:* *a* – number of population in the world, mln. people, *b* – average annual population increase rates for a preceding period, %; *c* – world GDP, USD bln. 1990; *d* – GDP output per capita, USD, 1990; *e* – average annual GDP growth rates, % of a preceding period

Table 18.25

**Dynamics of the Global Civilization in the 20th c.\***

	1900	1913	1929	1928	1950	1960	1970	1980	1990	2000
<b>Number of population,</b> mln. people	1500	1700	1975	2200	1507	3050	3700	4400	5235	6000
Growth of population number, by 1990, times	1,0	1,1	1,3	1,5	1,7	2,0	2,5	2,9	3,5	4,0
Average annual growth rates, %		1,0	1,0	1,2	1,2	1,8	2,1	1,7	0,6	0,6
<b>World GDP, in</b> prices and at the exchange rate of 1999, USD bln.	2590	3640	4995	5625	7555	12 305	19 270	27 105	36 655	46 581
Growth to 1990, times	1,0	1,4	1,9	2,2	2,9	4,8	7,4	10,5	13,9	18,0
Average annual growth rates, %		2,7	2,0	1,3	2,3	5,0	4,6	3,5	2,9	2,6
<b>GDP per capita,</b> USD thous. 1999	1,7	2,1	2,5	2,6	3,0	4,0	5,2	6,2	6,9	7,8
Growth of GDP per capita to 1900, times	1,0	1,2	1,5	1,5	1,7	2,3	3,0	3,6	4,0	4,6
<b>Number of employed in the world economy, mln</b>	<b>662</b>	<b>767</b>	<b>878</b>	<b>948</b>	<b>1088</b>	<b>1328</b>	<b>1594</b>	<b>1883</b>	<b>2146</b>	<b>2490</b>
Labor efficiency (GDP output per 1 employed)	3,9	4,7	5,7	5,9	6,9	9,3	12,1	14,4	16,8	18,7
<b>Labor efficiency to 1990, times</b>	<b>1,0</b>	<b>1,2</b>	<b>1,5</b>	<b>1,5</b>	<b>1,7</b>	<b>2,3</b>	<b>3,0</b>	<b>3,6</b>	<b>4,2</b>	<b>5,0</b>
<b>Commodity export in prices</b> and PPP in 1990, USD bln.	255	420	535	570	775	1280	2435	3935	5985	9040
Growth to 1990, times	1,0	1,65	2,10	2,24	3,04	5,02	9,20	15,43	23,47	35,45
Share of export in GDP, %	9,7	11,4	10,5	10,0	10,0	10,5	12,0	14,5	16,5	19,0

<sup>1</sup> [133, p. 497–513, 529, 539, 596]

of increase of the population number, GDP and GDP per capita – not more than 0.15%. Within this stage there were such periods when these indicators dropped even more (especially in the middle of the 1<sup>st</sup> millennium A.D. and in the 13<sup>th</sup>–15<sup>th</sup> c.) and the periods of a faster growth, but in general the trend is characterized by persistence and inconsiderable rise.

2. The situation changed when the early industrial world civilization germinated, when the population increase rate speeded up sharply (from 0.10% in 1000–1500 to 0.27% in 1500–1820), and the average GDP output per capita remained on the same level (0.005%). A potential accumulated for an industrial breakthrough, but numerous wars impeded the development of economy.

3. A radical turn occurred in the industrial period, in the 19<sup>th</sup>–20<sup>th</sup> c. The average annual population increase rates grew by 0.4–0.8% in the 19<sup>th</sup> c. and 0.93–1.93% in the 20<sup>th</sup> c., GDP increase – by 0.32% and 0.93% in the 19<sup>th</sup> c. and 2.11%, 1.02% and 4.90% in the 20<sup>th</sup> c.; average GDP per capita – from 0.54% and 1.30% in the 19<sup>th</sup> c. to 0.88% and 2.92% in the 20<sup>th</sup> c. A scientific-technological revolution and grandiose innovative breakthrough implemented on its base became the basis of the population and GDP growth rates that were the highest for the entire historical period, and also an economic rise in a number of countries and civilizations, which liberated from colonial dependence. Japan became a locomotive of such breakthrough.

However, already in the least quarter of the 20<sup>th</sup> a potential of such breakthrough died down, the population increase rates dropped from 1.93% to 1.62%, GDP – from 4.90% to 3.05%, average GDP per capita – from 2.92% to 1.43%. China became the leader in such growth; it was supported by India in its impulse. Concurrently the economic growth rates of developed countries somewhat slowed down, and the countries of a disintegrated social bloc rolled back, found themselves in the state of a deep-seated civilizational crisis. At the turn of the 21<sup>st</sup> c. the global civilization entered a long transitional period connected with a change of historical super cycle, world civilization, technological and economic modes of production, and prevailing socio-cultural system.

4. The UN's forecast shows that by the middle of the 21<sup>st</sup> c. the population increase rates will drop by 0.33% in general worldwide, and the countries with a high level of income, and also Russia, Ukraine and some developing countries will enter a long stage of

depopulation, aging of population, slowing down of economic growth rates. A pessimistic scenario of development of global civilization becomes quite probable in the 21<sup>st</sup> c.; in such case its integral estimation may drop from 67 points in 2000 to 52 in 2050 and to 45 in 2100. Mainly demographic (depopulation) and ecological (pollution of the environment) factors will render adverse influence. Global demographic and ecological crises will intensify each other and will become a sign of an impending global civilizational catastrophe.

However, a fundamentally different optimistic scenario of development of humankind is quite possible. Acting in the mode of reaction to arising threat «challenge-response» anticipated by **A. Toynbee** it will involve the factors, first of all, innovative-technological and spiritual, which are able to confront global threats. And in this case a demographic and natural-environmental factor will restrict the progress, but their action will be considerably neutralized and a summary integral estimation of the global civilization will remain stable (67 points in 2000, 69 in 2050 and 66 in 2100). One should hardly count on a rapid rise, but nevertheless humankind will get out of a run of storms and upheavals.

Also, it should be taken into account that the establishment of the humanistically noospheric world civilization, third historical super cycle that has the same nature and an integral socio-cultural system will conduce to the implementation of the optimistic scenario. Effect of such tectonic shifts will manifest themselves to a full extent in the second half of the 20<sup>th</sup> — first half of the 21<sup>st</sup> c. if, of course, humankind is able to choose the right way of development, and eliminate a threat of its self-destruction.

The summary estimation of the global civilization and groups of local civilizations is given in [table 18.26](#).

However, the implementation of the optimistic scenario is not guaranteed at all, it won't happen automatically. This demands that an active part of humankind, first of all, the intellectual elite (scientists and art workers) should realize the reality of such catastrophe (and nothing unites more as the existence of the common enemy, a deadly threat), work out the grounded ways to solve urgent global problems. Together with political and business circles, it should work out and implement a global strategy of coping with crises, going into the trajectory of sustainable innovative-economic development. The

Table 18.26

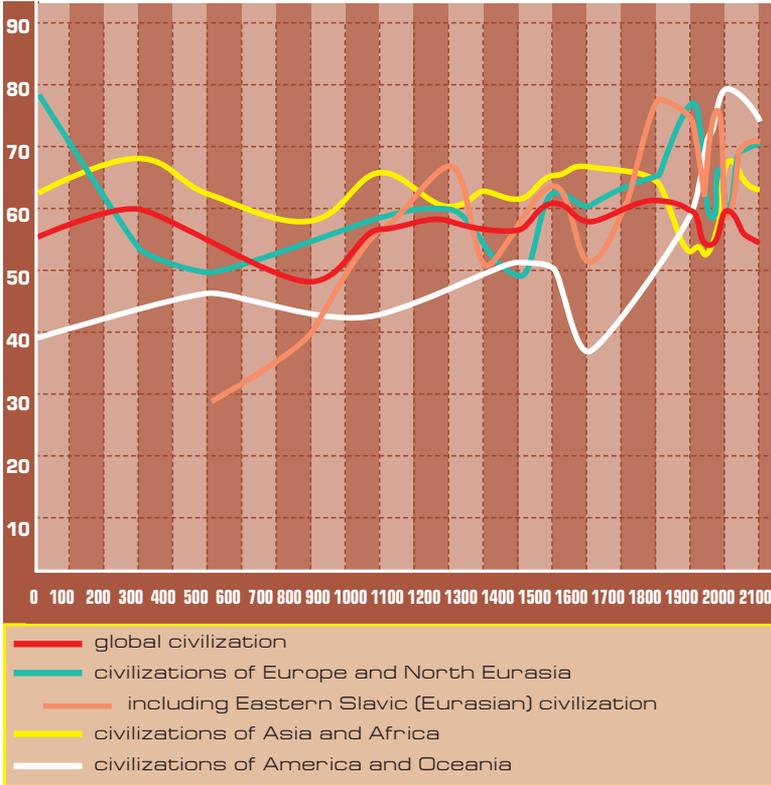
**Summary Estimation of the Dynamics of Global, World and Generations of Local Civilizations \***

Years	Civilizations of Europe			Including Eastern Slavic	Civilizations of Asia and Africa			Civilizations of America and Oceania			Global Civilization			World and Generations of Local Civilizations	
	c	d	e		c	d	e	c	d	e	c	d	e		
1	1	78	78		3	199	66	2	81	40	6	358	60	Decline of ancient and the 2 <sup>nd</sup> generation	
300	1	62	62		3	202	67	2	91	46	6	355	59		
500	2	137	49	30	4	239	60	2	94	47	8	470	59		
800	3	159	53	39	5	294	59	2	88	44	10	541	54	Medieval, 3 <sup>rd</sup> generation	
1000	4	228	57	57	5	305	61	2	89	44	11	622	57		
1200	4	245	61	67	6	364	61	2	97	48	12	706	59		
1300	4	220	55	51	6	375	63	2	100	50	12	695	58		
1400	4	190	47	57	6	381	64	2	103	52	12	674	56		
1500	3	184	61	64	6	374	62	2	102	51	11	660	60	Early industrial; formation of the 4 <sup>th</sup> generation	
1600	3	179	60	51	6	379	63	2	74	37	11	632	57		
1700	3	182	61	56	5	329	66	2	86	43	10	597	60		
1750	3	190	63	63	5	322	64	2	95	47	10	607	61		
1800	3	187	62	65	5	306	61	2	105	52	10	598	60		
1820	3	186	62	64	5	290	58	3	141	47	11	617	56	Industrial; bloom and decline of the 4 <sup>th</sup> generation	
1850	3	199	66	61	5	266	53	3	153	51	11	618	56		
1870	3	208	69	64	5	256	51	3	164	55	11	628	57		
1900	3	223	74	67	5	257	51	3	180	60	11	660	60		
1913	3	222	74	69	5	262	52	3	193	64	11	677	62		
1929	3	193	64	60	5	214	53	3	198	66	11	605	55		
1938	3	185	62	59	5	253	51	3	197	66	11	635	58		
1950	3	173	58	62	6	288	48	3	211	70	12	672	56		
1970	3	196	65	67	6	343	57	3	222	74	12	761	63		
1990	3	196	65	60	6	378	63	3	229	76	12	803	67		
2000	3	176	59	48	6	390	65	3	232	77	12	798	67		
2010	a	3	186	62	52	6	400	67	3	234	78	12	820	68	Formation of the post-industrial and the 5 <sup>th</sup> generation
	b	3	178	59	49	6	366	61	3	217	72	12	761	63	
2020	a	3	192	64	54	6	401	67	3	234	78	12	827	69	
	b	3	170	57	46	6	346	58	3	202	67	12	718	60	
2030	a	3	197	65	57	6	391	65	3	236	79	12	824	69	
	b	3	166	55	45	6	315	52	3	192	64	12	673	54	
2050	a	3	203	68	64	6	385	64	3	231	77	12	819	68	
	b	3	163	54	46	6	291	48	3	176	59	12	630	52	
2070	a	3	202	67	67	6	380	63	3	221	74	12	803	67	
	b	3	153	51	43	6	268	45	3	163	54	12	584	49	
2100	a	3	203	68	69	6	374	62	3	215	72	12	792	66	
	b	3	144	48	40	6	242	40	3	156	52	12	542	45	

\* Integral estimation. *Forecast: a* – optimistic scenario, *b* – pessimistic, *c* – number of local civilizations, *d* – summary estimation, *e* – weighted average estimation

Figure 18.10

**Combined Estimation of Dynamics of the Global and the Group of Local Civilizations (forecast — optimistic scenario)**



quality of life of all civilizations, all social strata in all countries would improve. This is a worthy and noble goal for active and responsible generations of the 21<sup>st</sup> century.

As it is seen from *fig. 18.10* the amplitude of fluctuations of the global civilization is smaller than that of local civilizations and their groups. During the past two millennia the summery integral estimation by the groups of European and North Asian civilizations is from 48 to 78 points, including the Eastern Slavic (Eurasian) one from 30 to 69 points; by civilizations of Asia and Africa it is from 50 to 67 points; by America and Oceania it is from 40 to 77 points. The fall of estimation of the global civilization during the change of the first

historic super cycle by the second (in the middle of the 1<sup>st</sup> millennium B.C.) during the change of world civilizations and during the world wars is obvious.

In the prospect for the 21<sup>st</sup> century a certain decrease of the global estimation is expected by the end of the century even in case of the optimistic scenario. However, a pessimistic scenario can't be excluded when this estimation will reach the lowest level in two millennia (45 points) if humankind isn't able to overcome the global demographic and energy-ecological crises or is involved into a disastrous clash among civilizations.

## Chapter 19

# STRATEGIC MATRICES OF DYNAMICS OF EASTERN CIVILIZATIONS



**T**he Institute for Economic Strategies under the direction of a Corresponding Member of Russian Academy of Sciences, Professor B.N. Kuzyk and an Academician of Russian Academy of Natural Sciences, Professor A.I. Ageev has worked out the methodology of application of strategic matrix in cliometrical measuring of civilizations cyclical dynamics. This methodology was used to find out and estimate 400-year and 800-year cycles in the history of Russian civilization (see chapter 14, § 3). Strategic matrix also appeared to be a very straightforward tool for the estimation of dynamics rates of a number of Eastern civilizations – India, China, Japan and Iran. Below are given the results of said researches in short.

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## 19.1. Strategic Matrix of India<sup>1)</sup>



### 19.1.1. India in the Ancient Period (before the 2<sup>nd</sup> c. A.D.)

The history of India of that period has not been studied enough and many findings of historians, including such cardinal issues as the chronological framework, the origins of the statehood, economy and social relations of ancient India are still controversial. It is generally believed that the most ancient class community existed in the valley of the Indus from the second part of the 3<sup>rd</sup> to the first half of the 2<sup>nd</sup> millennia B.C. and a little later in the Gujarat. In the second half of the 2<sup>nd</sup> millennium B.C. the Aryans began to penetrate India from the Northwest, they first settled in Punjab, and then in the valley of the Ganges. The emergence of the first slave states in North India dates back to the first half of the 1<sup>st</sup> millennium B.C. In the 6<sup>th</sup> c. B.C. many of them were found in the eastern part of north India, in the basins of the rivers Ganges and Jumna (the states Anga, Magadha, Brij, Kashi, Kosala, Panchala, Vatsa, Kuru etc.). In the sources Gandhara, Avant etc. are mentioned among all the king-

<sup>1)</sup> This section is made by **A.I. Ageyev**, Doctor of Economy, Professor, Academician of the Russian Academy of Natural Sciences and **B.V. Kuroyedov**, Candidate of Military sciences.

doms found to the Northwest and South of them. Monarchy was the only form of *state administration*. Free population consisted of four strata — groups (varns): Brahmans, Kshatriya, Vaisya and Sudra, where the first two occupied a privileged position. The state represented by the king collected taxes and duties from the Vaisya and Sudra. Slavery was mainly of a patriarchal nature. Slave labor was mainly used in households. The capitals of ancient kingdoms became the first cities of the Hindustan peninsula.

The economic advance of the 6<sup>th</sup>–4<sup>th</sup> c. B.C. introduced significant changes in the life conditions of the ancient Indian society. Development of agriculture, crafts and commodity-money relations caused a wide spread of slavery and the emergence of a powerful slave despotic government in Magadha by the middle of the 1<sup>st</sup> c. B.C. Concurrently with development of *economy* exploitation of slaves intensified, which finally aggravated social contradictions and gave rise to the religious-sectarian movement from which Buddhism and Jainism split.

For its time the *Indian culture* was already on a rather high level. Religious hymns in Sanskrit — Veda, which already contained the dawn of lyrics, epos and drama, started the tradition of the Indian literature. Further in spoken folklore the nucleus of enormous epics «Mahabharata» and «Ramayana» that survived to this day was formed. Later, at the end of the 1<sup>st</sup> millennium B.C., the Buddhist literature, which is characterized by a combination of religious didactics with folk subjects, was created. The dissemination of Buddhism brought about mass construction of temples, cloisters and memorial structures.

A demand in slaves and extension of economic base promoted invasive wars of Magadha. Already in the middle of the 4<sup>th</sup> c. B.C. in the reign of the Nand dynasty nearly the whole valley of the Ganges fell under Magadha's power.

Despite that all this territory was often externally attacked (the most considerable of them — conquering of a part of the valley of the Indus river by Persian dynasty of Achaemenids at the beginning of the second half of the 4<sup>th</sup> c. B.C. after campaign of **Alexander the Great**), expansion of Magadha ensured by a pretty strong *army* by that time continued. This process further developed in the reign of the Mauryas that changed the Nands in 317 B.C. About 305 B.C. Seleucids (the Persian dynasty) had to recognize the dominance of Magadha over the lands conquered by **Alexander the Great**. As a result of successful campaigns the kings of the Mauryan dynasty

took power nearly on all territory of today's India, and also over a part of today's Afghanistan. The Mauryas established strong administrative and military machinery. The state of Magadha maintained a brisk foreign trade, especially with western neighbors, which was possible due to a developed net of roads.

As there are no detailed reliable sources on the history of Magadha it is quite difficult to determine masterfully its geopolitical position as a major Indian state in the world and to make its accurate strategic matrix, however, the available data permits to represent it as shown in *fig. 19.1*.

The evaluation of absolute values of the indicators in the matrix is given in summary *table 19.1*.

As the summary of the data provided indicates, in general Magadha, which actually represented India in that period, was strong and even possibly the strongest regional state. A high level of the endowment with natural resources is explained by favorable climate conditions and low level of demands of economy of that time.

The aggravation of internal contradictions and external invasions depleted the strength of the Mauryan dynasty. The power began to disintegrate. The result was a recurrent change of the ruling dynasties of the Greco-Bactrian, Parthian and Shaka conquerors in the 2<sup>nd</sup> c. B.C. — 1<sup>st</sup> c. A.D.

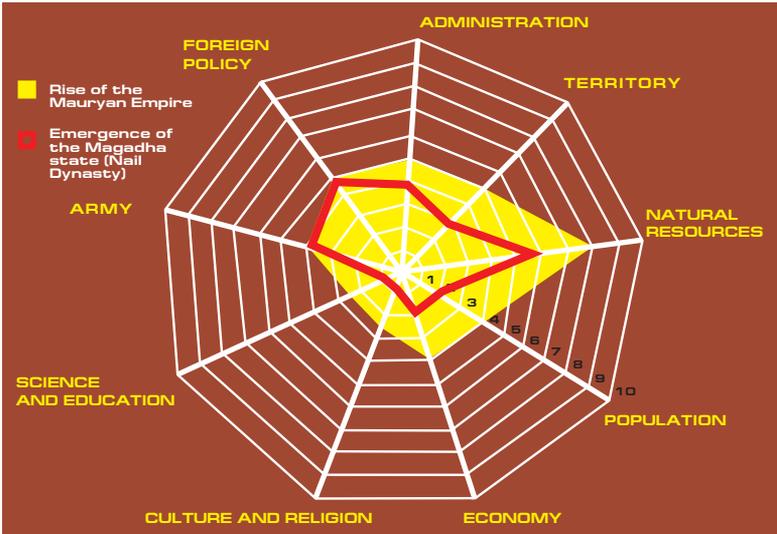
In the 1<sup>st</sup> c. A.D. a major part of North India found itself under the power of the Kushans who established the Kushan Kingdom. In the 1<sup>st</sup>—3<sup>rd</sup> c. it considerably expanded its boundaries by inclusion of a greater part of Afghanistan in the West and nearly all Tajikistan and Uzbekistan in the North to its territory. The Kushan Kingdom traded heavily with the immediate neighbors, and also with Rome and countries found in the East, including China.

After disintegration of the Kushan power in the 4<sup>th</sup> c. the rise of Magadha began again. In a short period under the Gupta dynasty it transformed into the empire and took power over a large part of north India from the Bay of Bengal in the east to the Punjab and Kathiawar peninsula in the west. The Gupta Empire reached the largest sizes in the 4<sup>th</sup>—5<sup>th</sup> c. under **Chandragupta II**.

Apart of Magadha there were several more states on the territory of today's India: Vakataka, Pallava, Ganga etc., however they were considerably smaller by their sizes and we may mainly judge about them only by the documents of the empire that have survived to this day. Nevertheless, there are exactly these sources that permit to make a more accurate strategic matrix of India of that period.

Figure 19.1

### Strategic Matrix of India of the 4<sup>th</sup> – Beginning of the 2<sup>nd</sup> c B.C.



**Territorial development** was determined by conquering of considerable lands in the North and West.

Land was the major **natural resource** with a private ownership to land which began to be introduced in the 4<sup>th</sup>–2<sup>nd</sup> c. B.C. Nearly all necessary products both agricultural and craft were manufactured within the country. They traded mainly in luxury and weapons.

The base of **economy** was still communal agriculture, but along with it the first large households of feudal type already emerged.

**The population number** of Magadha is estimated in 4–6 mln. people at its heyday. This is considerably less than in other great empires of that time (Persia, China), but nevertheless Magadha can be well viewed as the largest regional power.

**Culture and religion** developed under the influence of Hinduism and Buddhism which became widespread. Besides the works with religious contents, the so called Ten Songs that are mainly of a secular nature have survived to this day, and also a collection of folktales «Panchatantra» written in Sanskrit. In the Gupta reign art entered its heyday. Palaces, cloisters and temples were actively built. The image of Buddha got a canonical, completed form at that time.

In India of that period *science and education* developed first of all on the basis of cloisters and the court of rulers. This determined major directions of studies — philosophy, mathematics, medicine, pharmacology, and chemistry (alchemy). The achievements of Greek, Persian and Chinese cultures had a great influence on science.

The specifics of the *armed forces* of the Indian states of that period and to this day is special divisions in the army (in addition to traditional infantry and cavalry) the major weapon of which was specially trained wild animals — elephants, leopards, tigers etc.

Apart from external expansion usual for that time the major lines of *foreign policy* were the ensuring of security of its borders and expansion of commercial relations with neighboring states.

As it follows from *fig. 19.2* the major change of the strategic matrix of that period is a growth of the indicator of culture and religion determined by consolidation of positions of Buddhism and penetration of this religion into neighboring states.

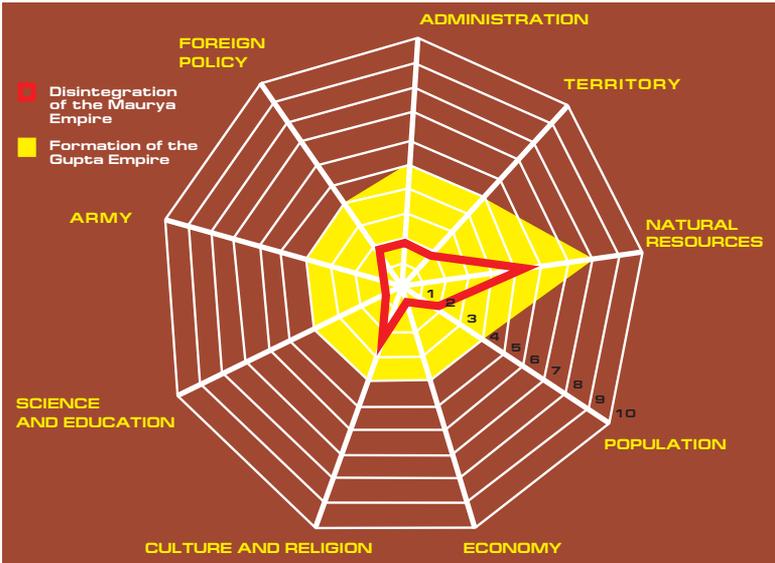
### **19.1.2. The Middle Ages and Modern History of India (6<sup>th</sup> — middle of the 19<sup>th</sup> c.)**

The Gupta state disintegrated in the 6<sup>th</sup> c. as a result of feudal civil discord. Further, throughout a rather long period until India was conquered by the Englishmen in the 18<sup>th</sup> c., its territory remained divided into many states waging constant wars against each other, which ended with a fall of some dynasties and rise of others. The Delhi Sultanate existing in the 13<sup>th</sup>–14<sup>th</sup> c. (its rulers succeeded in beating back the Mongolian Inroads and protected thereby the rest of India) and the Empire of the Great Moguls, which changed it after the victory of the Afghan conquerors, were the most considerable of them. For a short period this state managed to unite under its power all Northern and Central India, and also a considerable part of modern Afghanistan (including Kabul). In the first half of the 18<sup>th</sup> c. the Mogul Empire disintegrated into individual principalities.

It is easy to notice that all more or less strong states on the territory of India emerged only in its northern part throughout its history until colonization. It is explained by a very advantageous geographical position of North India — on the crossing of many trade roads (including the Great Silk Road) from the East to the West

Figure 19.2

**Strategic Matrix of India, 2<sup>nd</sup> c. B.C. — 5<sup>th</sup> c. A.D.**



and from the South to the North, and also by favorable climate conditions.

One more specific feature of that period became a widespread of Islam in North India. The matter is that many neighboring countries of the Middle East, and also Central Asia had already embraced Islam as an official religion. With the establishment of the Delhi Sultanate the influence of Islam, which was implanted by the Moslem invaders, intensified even more. This process continued in the Empire of the Great Moguls as a result of which Islam became the major religion practiced in the North of India while Hinduism kept its leading positions in its southern part.

At the beginning of the 17<sup>th</sup> c. the European trade capital represented by the English East-Indiaman Company and United Dutch East-Indiaman Company appeared in India (established in 1600 and 1602, respectively). In the second half of the 17<sup>th</sup> c. trading posts of the French East-Indiaman company emerged. With the assistance of the Indian merchants the Englishmen, Dutch and French bought up the products of an Indian make and removed them not only to Europe, but Iran, Indonesia, China and other countries.

Endless encounters with the states-successors to the Mongolian Empire permitted the Europeans to change over from trade to military expansion easily. A struggle for the world leadership between Great Britain and France involved the territory of India, too. As a result of the war of 1746–1763 the Englishmen totally defeated its adversaries in South India and began military colonization of the Indian territories. In 1803, the British army took Delhi, and in 1814–1826 they annexed the southern foothill of the Himalayas and Assam, in 1843 – Sind, and in 1845–1849 – Punjab.

Military colonization and active exploitation of locals by foreign invaders caused the resistance of Indian people and the rise of national liberation movement, often invested in a religious-sectarian form (Sanyasi, Namdhari and Vahhabits). Development of production relations and also a spread of European education in the higher sections of the Indian society made a foundation of the bourgeois-national movement, which germinated in the second third of the 19<sup>th</sup> c.

With a greater or less activity such national-liberation movement developed throughout the 19<sup>th</sup> and the first half of the 20<sup>th</sup> c., gradually consolidating and creating new forms of struggle.

In the 60s – beginning of the 80s the organization of national aristocracy and bourgeoisie emerged, which in 1885 united in the Indian National Congress (INC). With the lapse of time the INC split into two directions: liberal and radical, struggle between them told also on the development of internal political situation in the country. In its turn, colonial authorities in struggle with the national-liberation movement spread religious strife between Hinduists, Buddhists and Moslems. The Moslem League – community organization of the Indian Moslems – was sponsored by them in 1906. As a counter to the Moslem League the community Hinduist organization – Hindu Mahasabha emerged (the Great Union of Hindus).

During World War I the convergence between the Indian national congress and Moslem League occurred, the movement for granting local government to the country emerged. The form of nonviolent resistance (Satyagraha) advocated by **M.K. Gandhi**, who became a recognized leader of the Indian National Congress, turned to be most relevant form in line with the interests of both national and petty strata. His doctrine (Gandhism) was proclaimed an official ideology of the party.

World War II caused the next powerful wave of national-liberation movement in India. England had to make concessions and in

1946 it granted India the dominion title. In 1947 two new independent states emerged on its territory: India and Pakistan.

### 19.1.3. Independence Period (from 1947)

In the first years after recovery of independence the government of the INC got down to restoring economy of the country. There were established its own cotton and jute industries, rearranged the operation of transport, the development of new agricultural lands began. However, food and industrial raw materials supply shortage told adversely on economy. The problems were aggravated by the need to employ millions of the unemployed, including refugees from Pakistan. The situation was complicated by a military conflict and trade war with Pakistan because of Kashmir and a number of other issues related to economic consequences of artificial division of the country into two states. Despite repeated attempts of the world community to conduce to the settlement of such conflict, the relations between neighbors have not improved yet. Today the situation resembles more an armed armistice.

**State administration.** After recovery of independence the Indian government carried out a reform of the state administration by liquidating many feudal principalities. They were either included in the states — former provinces of the British Empire or united into union territories (union of principalities). By 1949 the Indianization of the administrative machinery was mainly completed. On November 26, 1949 a new constitution of the country was adopted and its enactment was declared the Day of Republic (January 26, 1950). Under the Constitution India is a federative republic. The head of the state is the President elected for a term of five years by an electoral college from the parliament members and legislative assemblies of the states. The President is vested with large powers: appoint the Prime-Minister and on recommendation of the latter — other members of the government, members of the Supreme Court; is in power to dissolve the parliament house, declare national emergency; he is the Supreme Commander-in-Chief.

The supreme legislative body is the parliament consisting of the President and two houses: House of the People and the Council of States. The government of the country — the Council of Ministers — is formed by the party which won election to the House of People.

***Territorial development.*** In 1947–1949 555 (out of 601) former principalities joined India, others became a part of the dominion – Pakistan. India embraces a larger part of the region of the South Asia, and by territory – 3,268 thous. sq. m – is among ten largest countries of the world. And it has pending territorial disputes with Pakistan and China.

***Natural resources*** of India are very considerable. It ranked fourth in the world by the reserves of fossil coal, including metallurgic coal. Rich deposits of bauxites, iron, copper ores, manganite, chromitite and titanous ores, gold, high quality mica, rare and precious stones, natural gas and oil are found here.

While India did not practically purchase raw materials by the moment when it recovered independence, then a sharp rise of its industry considerably changed the picture: already at the beginning of the 21<sup>st</sup> c. its own stock of energy carriers allowed ensuring local demands of Indian economy only for 70–80%.

***Population number.*** India is one of the most densely populated countries of the world. At the moment of the recovery of the statehood 360 mln. people resided there (more in China only), an average density of population made about 150 people per sq. km. In further years a high level of the birthrates and a gradual reduction of the mortality level ensured an acceleration of the population increase rates. India had to introduce measures restricting the birthrates. As a result by 2003 the population number in the country made 1.05 bln. people (16.6% of the population on the Earth), under an average increase rate of 1.47% and an average population age a little younger than 24 years old.

***Economy.*** From the times of the British dominance India has preserved the structure of economy that is typical of colonial countries. But unlike many other colonies a number of relatively developed branches of factory industries existed here. On the eve of proclamation of independence India was next only to the USA by production, for instance, cotton cloths; it gave more than 50% of world production of the jute items. There was developed processing of agricultural raw materials (sugar, tea-pressing, tobacco and other sectors of the food industry, leather and tanning production), mineral mining industry (coal, manganese and iron ores, mica mining).

A lack (or an extreme weakness) of vital sectors of heavy industries – metallurgy, mechanical engineering, chemistry, oil production and petrochemical industries and power industry – was acutely felt. The need to import a larger part of the means of production,

nearly full dependence on foreign industrial and scientific-technological base underlay economic dependence of India on the developed states, mainly Great Britain.

At that period agriculture was the major sector of economy giving about a half of GDP. The Indian agricultural economy has an obvious plant breeding direction, and the extent of land management is very high: plough-lands make more than 1/2 of the total area of the country. Warm and humid climate permits to develop a year-round farming nearly throughout the territory of the country (except the uplands), however, as there is not enough humidification during a dry period only about 15% of land under cultivation is sown more than one time, and the Indian farming is based on irrigation. In the middle of the 20<sup>th</sup> c. India was a significant producer and exporter of tea (55% of world production), herbs and spices (more than 30% of world export), rice (nearly 30% of world harvest) and tobacco (3<sup>rd</sup> place in the world after the USA and China).

Thus, in that period Indian economy was characterized by an extreme extent of underdevelopment, on the one hand, which manifested itself in an extremely low level of national income per capita (in 1950 it was 11 times lower than in Great Britain, and 28 times lower than in the USA), and on the other hand, a high level of dependence of world economy on a big number of products produced in India.

It should be noted that the national leadership skillfully used the available funds by investing profits from raw material branches in the creation of a base national industry. Furthermore, having become the leader of the non-alignment movement, i.e. not joining directly any of the formed confronting ideological camps, India got economic assistance from both parties, which also told on successes of economic construction. Today's Indian economy is a combination of traditional and advanced agricultural production with the advanced industry and developed sector of service and information services. The Indian economy is one of the most dynamically developing economies in the world in terms of the GDP growth rates (from 1990 to 2002 6% on average annually).

This is proved by the growth of a well-being of population. Thus, according to the UN data, the number of people in India, whose level of income is below the living wage, reduced nearly twice in 2000–2003 only (by 45%).

**Culture and religion.** Religion of an absolute majority of population (more than 83%) is Hinduism. Islam (mainly of a Sunni per-

suation) is professed by more than 10% of population, Christianity — 2.4%, Sikhism — about 1.8%, Buddhism — 1.7%, Jainism — about 0.5%. There is a small number of Zoroasterians and Hebrew. Some upland people preserve ancient beliefs (ancestor worship, nature-worship etc.). Large population and its quite free migration, and also original philosophy and traditions have permitted Hinduism to become quite popular both in Asia and worldwide.

The Indian distinctive culture represents a unique phenomenon. Not only traditional Indian art based on ancient religious canons and traditions enjoys a deserved interest and respect in the world, but today's Indian literature, cinematography and choreography.

**Science and education.** In India from the middle of the 20<sup>th</sup> c. there were extremely few highly qualified specialists (as a rule from well-to-do strata of society) who got good education (including abroad). And the overwhelming majority of population was semiliterate or illiterate at all. The leadership of the country pursued active measures in order to remove this disproportion, and already by 1970 the task to establish a national system of public education and base for training specialists including top professionals was solved. Now the achievements of India in nuclear physics, space technologies, medicine are generally known, and in the field of the software development the country occupies the leading position in the world.

**Armed forces.** After a split from its parent state India inherited quite powerful armed forces, especially land forces, which was evidenced in the course of the first Indian-Pakistani conflict. The leadership of the country paid much attention to military construction. Successes of economic development in the country conduced to it. Modern Indian armed forces, in addition to the land forces, air force and navy have also strategic nuclear forces.

The availability of an air capable vessel in the Indian Navy and a scheduled delivery of one more («Admiral Gorshkov») in 2006, along with other advanced vessels already available and just introduced in operating strength make them most powerful in the region by the level of combat (operational) capability. It is necessary to add to this that in recent years India has strengthened seriously its air force by purchasing a considerable number of advanced Russian fighter planes and retrofitting planes that have been bought before.

Successes of India are quite noticeable in the development of national war industry. Thus, while it produced only some

types of artillery-small arms and ammunition in the middle of the 20<sup>th</sup> c., now it manufactures nearly all range of weapons necessary for the army both under licenses and developed independently.

The basic lines of the Indian foreign policy after it recovered independence were the establishment of external ties, strengthening of international authority and ensuring security of boundaries. As the country develops and expands its circle of national interests, activity and the sphere of application of the Indian diplomacy have considerably increased. One of the most noticeable and considerable successes is the recognition of India as an acknowledged leader of the non-alignment movement.

**Foreign policy.** Now the number of priorities of the Indian foreign policy includes settlement of territorial problems with neighbors — China and Pakistan; recognition of legality of rights of India to have nuclear weapons in the world; getting the status of a permanent member of the UN Security Council.

Changes in the indicators of strategic matrices of India of the middle of the 20<sup>th</sup> — beginning of the 21<sup>st</sup> cc. may be traced in [fig. 19.3](#).

A comparison of two indicators of two matrices clearly indicates successes of India for a time elapsed after it recovered independence.

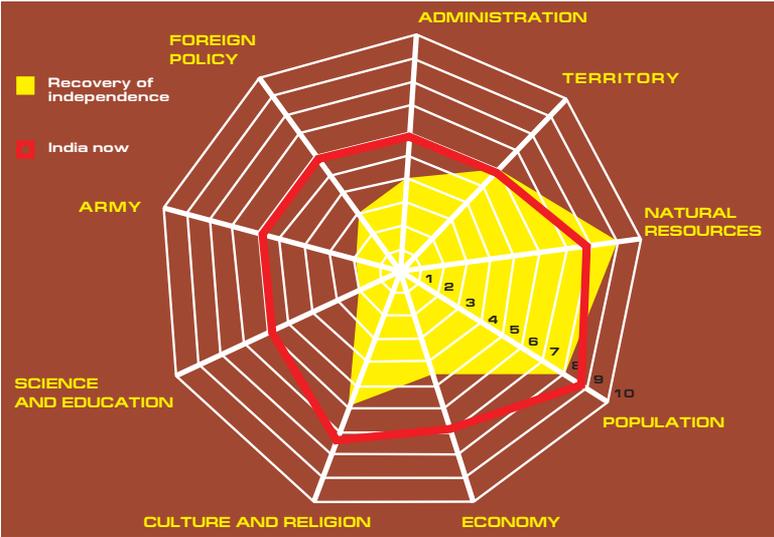
In the summary table changes of the values of indicators of the strategic matrix of India in the described historical period ([table 19.1](#)) are shown.

#### 19.1.4. Outlooks of India in the 21<sup>st</sup> c.

Like China India exerts all its strength to consolidate its position in the world arena and to become an officially recognized great power. Its wish is the more noticeable the more successes are reached by the leadership of the country in the state construction whether it involves most powerful and fitted with advanced (including nuclear) weapons armed forces in the region or antipoverty programs (in 2000–2003 the number of population in India whose income was below living wage fell by 45%). According to some economists, despite the rates of economic development of India are not so fast as of China, a greater adaptivity of Indian economy due to its openness, smoothed disproportions between governmental and private sectors, more efficient use of investments gives

Figure 19.3

**Strategic Matrix of India in 1947–2003**



India considerable advantages in the world economic competition with China. This specifics permit to speak that India has all chances to become one of the leading states of the world already by the middle of the present century.

**System of administration.** Traditions accumulated for the years of the British dominion, and also a number of national features and tendencies determined by the first heads of the country after it recovered independence have promoted the establishment of stable democratic regime in India with a well-worked out procedure for rotation and demising of power. Despite active political struggle inside the country, successes of economic development and stability of foreign political course indicate that the system of state administration is sustainable and highly efficient.

**Territorial development.** Despite certain territorial losses (Kashmir, inconsiderable areas in the Northwest of the country) the Indian territory remains considerable.

**Natural resources.** India is still one of the major suppliers of some types of industrial and agricultural raw materials to the world markets. In view of the fact it may be stated that although the dependence of the country on external supplies of power carriers has noticeably grown and will only increase in future, the state policy of

an active development of science-intensive, high-technological industries and support of scientific-research development in the field of alternative sources of power will allow India to retain the role of the world leader by the level of endowment with natural resources.

**Population.** In the period under review the major factors determining the growth of Indian population will be high rates of natural increase and increase in an average lifespan. According to the medium variant of the UN demographic forecast, the population number of the country will reach 1 485 mln. people by 2050 (an increase of 53% for 50 years) and will exceed the population number in China. Successes of the state in elimination of poverty will conduce considerably to it, despite officially pursued policy restricting birthrates.

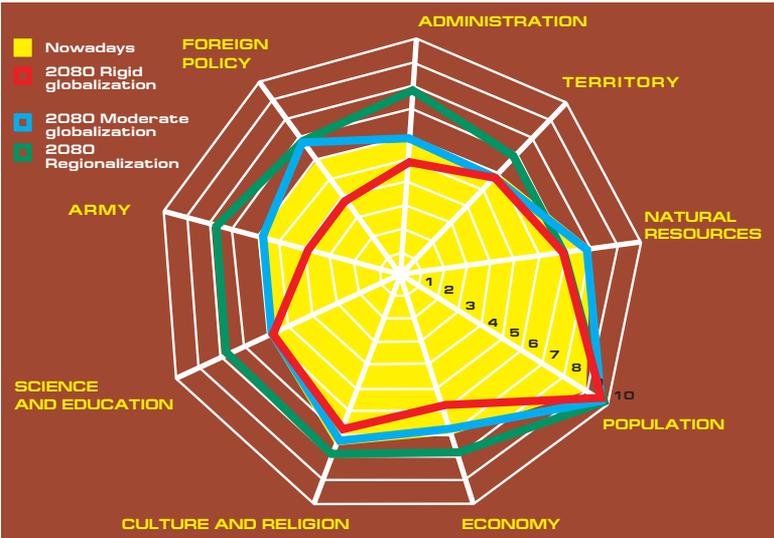
**Economy.** According to the estimates of the World Bank India is ranked among ten largest economies in the world and stably demonstrates high growth rates throughout two decades. Despite their certain fall (4.2% of the GDP increase in 2003), the country is among the number of world leaders by this indicator. And some specialists believe that such drop in rates is determined in many ways by an official governmental policy targeted at the elimination of overheating effect of national economy and possible further crisis that is able to cause a greater damage to it than a regulated inconsiderable slowing down of growth.

The actions of the Indian diaspora worldwide that has, according to some estimates, free monetary resources in size of \$ 1.5 trillion USD (based on the data as of the end of 2003) has become one of essential and increasingly significant factors for economy of the country. And the volumes of capital that return to the Indian economy are growing all the time. This fact is corroborated by the issuance of special many-billion loans for expats by the Indian government and not once and successfully.

**Culture and religion.** One of the consequences of globalization (along with a growing influence of admass western culture on a younger generation and which increasingly concerns the leadership of India) becomes a growth of its international cultural influence. One of essential objective prerequisites for that is a combination of three major religions – Hinduism, Buddhism and Islam – on the territory of India. Taking after Christianity a desire for preaching activities, today's Hinduism becomes an increasingly noticeable phenomenon in the world culture and religion. This is supported by

Figure 19.4

**Strategic Matrix of India in 2003–2050**



an increasing influence of the Indian diaspora in the West and growing expense of Indian religious organizations for a missionary outreach.

Along with that one of the tasks of the heads of India in foreseeable future is a growth of national awareness similar to one observed in the middle of the 20<sup>th</sup> c. that should become the base of a new cultural rise of the country.

**Science and education.** The establishment of full-fledged systems of public education and training of research personnel in India, and also scientific schools recognized in the world and working over a number of topical directions guarantee to the country further successes in the sphere of science. And it is not accidentally that India occupies the second place in the world by number of highly qualified manpower.

The priority directions of scientific researches enjoying special attention on the part of the state – space exploration, nuclear processes control (including controlled thermonuclear synthesis), alternative power industry, applied mathematics, complex oceanographic researches etc.

**Armed forces.** Relations of India with its immediate neighbors – Pakistan and China – throughout the latest 50 years

developed far from the best way. Therefore the Indian leadership gives much concern to the defense issues. And although India has declared not once its peaceableness and a refusal from military dominance, nevertheless it has in actual fact the strongest armed forces in the region fitted out with all latest weapons, including nuclear missiles.

In the long term the major aim of military construction of the country will be comprehensive modernization of armed forces and their mastering of principles for conduct of military operations in accordance with the latest achievements of a techno-military revolution. The major ways for attaining such objective the Indian military command believes:

- improvement of the system of military administration, including its fitting out with advanced automated systems;
- retrofitting of all types of armed forces (especially air force and navy) with advanced weapons and military hardware;
- establishment of the air defense forces of the country that is able to ensure efficient protection of key military and governmental objects, including against ballistic rocket attacks (at first – midrange and short range);
- accelerated accumulation of strategic nuclear capabilities, establishment of complete nuclear «triad» consisting of land, sea and air (strategic aviation) components.

Apart from the nuclear weapons the Indian army is likely to pass into service ocean-spanning rockets by 2010. A significant role in the desire of the Indian leadership to turn the country into the leading regional (and in the long view – also world) power is attached to the navy. Quite ambitious plans of its development envisage that the navy of the country will dominate in the Indian Ocean by 2015.

**Foreign policy.** The claims of India to the status of superpower were first openly pronounced by local politicians relatively recently, not more than 10 years ago. And the major lines of foreign policy on the path to achieve this aim include the following in foreseeable future:

- strengthening of position of India as a leader of the group of the «non-aligned» countries;
- getting the status of a permanent member of the UN Security Council;
- recognition of the right of India to have nuclear weapons by the world community;
- decision of territorial problems with China and Pakistan;

Table 19.1

**Changes of Major Parameters of India  
by Indicators of its Strategic Matrix  
(4<sup>th</sup> c. B.C. — end of the 21<sup>st</sup> c.)**

Event	Date	Indicators of the Strategic Matrix								
		Adminis- tration	Territory	Natural resources	Popula- tion	Economy	Culture and religion	Science and educa- tion	Army	Foreign policy
Before the 2 <sup>nd</sup> c. B.C.										
Emergence of the Magadha state (Nail Dynasty)	6 <sup>th</sup> c. B.C.	4	3	6	2	2	1	1	4	5
Beginning of the reign of Mauryan Dynasty	317 B.C.	3	4	7.5	3	3	2	2	3	4
Rise of the Mauryan Empire	End of the 3 <sup>rd</sup> cc. of the 2 <sup>nd</sup> cc. B.C.	5	5	8	4	4	2.5	2.5	4	5
2 <sup>nd</sup> c. B.C. - 5 <sup>th</sup> c.										
Fall of the Mauryan Empire	2 <sup>nd</sup> c. B.C.	2	2	6	2	1	3	1	1	2
Rise of the Kushan Kingdom	2 <sup>nd</sup> c.	5	5	8	4	4	3	4	4	4
Fall of the Kushan Kingdom	IV v.	3	3	7	3	3	3	4	3	3
Establishment of the Gupta Empire	V v.	5	5	8	4	4	4	4	4	4
6 <sup>th</sup> - 19 <sup>th</sup> cc.										
Fall of the Gupta Empire	VI v.	3	3	7	4	3	4	4	3	2
Rise of the Delhi Sultanate	начало XIV в.	4	4	8	5	3	4	4	4	3.5
Rise of the Great Mogul Empire	конец XIV в.	6	6	9	7	4	4	5	5	4
British colonization, taking Delhi	1803	3	4.5	8	6	3.5	4.5	4	3	3
1947 - to the present day										
Recovery of independence	1947	4	6	9	8	4.5	6	2	2	3
Present day	2003	6	6	8	9	7	7.5	6	6	6
Forecast										
Rigid globalization	2080	5	6	7	10	6	7	6	4	4
Moderate globalization	2080	6	6	8	10	7	7.5	6	6	7
Regionalization	2080	8	7	7	10	8	8	8	8	7

➡ the acknowledgement of India by the world community as a nuclear power;

➡ the decision of the territorial problems with China and Pakistan.

Its desire for keeping a balance in the relations with all world centers of force – the USA, Europe, Russia and China remains a typical feature of the Indian policy.

A strategic matrix of India for an outlook to 2050 based on three scenarios (RG – rigid globalization, ModG – moderate globalization; Reg – regionalization) is given in *fig. 19.4* and *table 19.1*.

## 19.2. Strategic Matrix of China<sup>1</sup>

### 19.2.1. Ancient China

Terse lines of ancient sources do not permit to discourse upon the condition of the Chinese state before the middle of the 2<sup>nd</sup> millennium B.C. with an adequate reliability. Referring to the so called oracle bone inscriptions (the earliest ones date back to the 14<sup>th</sup>– 3<sup>th</sup> c. B.C.) many Russian and foreign historians believe that the first state in ancient China – Yin – was formed by the end of the 14<sup>th</sup> c. B.C. Originally it was situated in the middle reach of the Huang He river, but it expanded its territory by the 11<sup>th</sup> c. B.C. as a result of protracted wars with neighboring tribes: Yin included the lands of today's provinces Henan, Shanxi and partially Shaanxi and Hebei.

In the 11<sup>th</sup> c. B.C. Yin was conquered by the Chou tribe and this new state got the name of this tribe. The period of its existence falls into two periods: Western Chou (the 11<sup>th</sup>–16<sup>th</sup> cc. B.C.) and Eastern Chou (8<sup>th</sup>–3<sup>rd</sup> cc B.C.).

An ample territory conquered by Chou was distributed among its relatives, confidants and military leaders by the first rulers – wangs. They were quite independent of the wang and often competed with each other. As a result of their struggle large kingdoms gradually formed and with time the rulers of such kingdoms began to ignore the power of the Chou-wang. When in 770 B.C. the capital of the Eastern Chou was moved to the east under the threat of the inroad of nomads, to Loyan (today's Henan province), the period of the Eastern Chou (770–256 B.C.) began, and a gradual

<sup>1</sup> This section is made by corresponding member of RAS **B.N. Kuzyk**; Doctor of Economy, Prof. Academician of the Russian Academy of Natural Sciences **A.I. Ageyev**; Candidate of Military Sciences **B.V. Kuroedov**.

transformation of the Chou wangs into the nominal rulers was its typical feature. Already in the 7<sup>th</sup>–6<sup>th</sup> cc. B.C. the Chou monarchy released its hold over the kingdom once subdued to it. From that time several large kingdoms emerged – Qi, Chu, Qin, Jin, Sang, Wu, Yue and Lu.

The period from the 5<sup>th</sup>–3<sup>rd</sup> c. B.C., the downfall of the Chou, is known in the history of China under the name Zhanguo (Warring States). The wars of the Zhanguo period ended with the victory of the Qin Kingdom and the establishment of the empire under the same name, the first one on the territory of China (221–207 B.C.). Its founder and first Emperor **Qin Shi Huangdi** carried out a number of reforms, which united and strengthened the country. In his reign the Great Wall of China was built. However, as a result of the uprisings of 209–206 B.C. the Qin Empire ceased to exist.

In 206 B.C. **Liu Bang** (Gaozu) established a new dynasty and empire – the First (Western) Han that existed until 25 A.D. The empire ran wars and conquered many lands, including territories of modern Viet Nam and North Korea. Control over considerable areas in the South of Asia permitted to establish the famous Silk Road, by which commodities were routed to the Near East and Europe.

However, the situation in the empire remained unstable. In the course of mass uprisings of the people known in the history as the Red Eyebrows and the Greenwoods, the Western Han Empire was destroyed. The uprising of the Red Eyebrows was suppressed in 27, but only by 37 a new ruler of the Han – **Liu Xiu** – managed to unite the country and to establish a new dynasty – Later (Second, or Eastern Han) existed until 220. The new empire opened one more path for economic and cultural exchange with western countries – by the sea – running round about India. Spread of Buddhism began in the same period in China.

From the middle of the 1<sup>st</sup> c. A.D. when the situation in the country stabilized, the Eastern Han dynasty began a foreign expansion conquering a number of lands of Dzungaria and Eastern Turkistan. But in the period from 150 to 220 the Eastern Han was overwhelmed by a wave of the uprisings that caused a lot of harm to the country. The reason of a final disintegration of the empire was a struggle of military-feudal groupings, who established three new states – Wei (220–265), Shu (221–263) and Wu (222–280) by 220 on the ruins of Han. The period when these states existed got the name Sango (Three Kingdoms). This period marked by

struggle between kingdoms ended in 280 by uniting of the country under the Western Jin dynasty (265–316) for a short period of time. However, the Western Jin Empire weakened by internecine struggle of the feudal groups and peasant uprisings failed to repulse the incursions of nomadic people who destroyed it and conquered all northern China. Further 16 non-Chinese kingdoms were established on these territories, struggle between them continued for more than one hundred years and completed by uniting all them under the power of the strongest one – Northern Wei (386–534). In the South in 317 the dynasty which got the name Eastern Jin (317–420) was restored.

A period from the end of the 6<sup>th</sup> c. is known in the history under the name Nan Bei Chao – Southern (386–589) and Northern (420–589) dynasties. It was characterized by wars between northern and southern kingdoms, and also internecine internal struggle of feudalists. In 589, after protracted internecine wars, **Yang Jian**, a warlord proclaimed the Emperor of the Sui Dynasty in 581 united the whole country.

In 610, the Sui Dynasty also disintegrated as a result of the uprising of peasants exhausted by expropriatory taxation. Feudalist **Li Yuan** who was proclaimed the Emperor of the Tang dynasty in 618 was most successful in the feudal struggle. Wars for unification of the country continued about 10 years more.

A strategic matrix of China of the 5<sup>th</sup>–6<sup>th</sup> c. may be represented as follows (*fig. 19.5*).

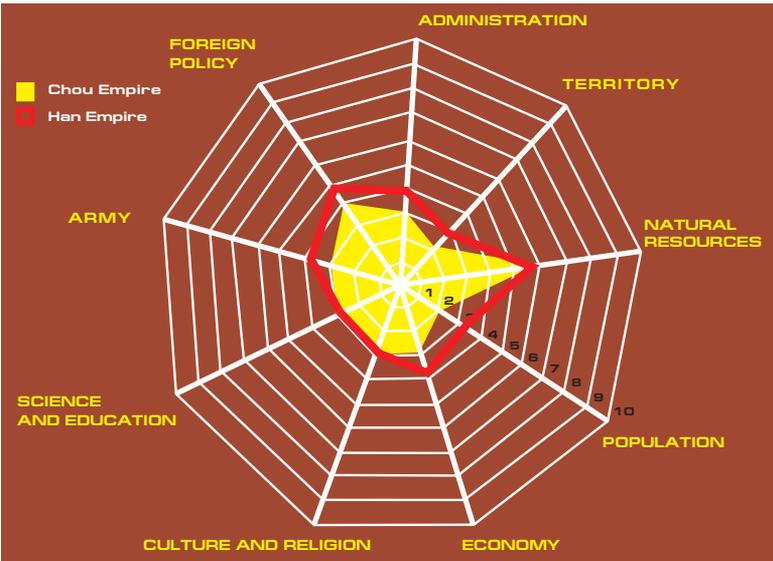
The indicators given in the figure show that the formation of China as a regional power may be viewed as the major result of that period. And the organization of efficient system of the system of state administration due to a strong central power, endowment with natural resources, and also the level of achievements of science and education established preconditions for further successful development of China and its transformation into the state excelling many neighboring countries.

**State administration** of ancient China is characterized by an absolute power of an ancestral monarch – wang. Feudal aristocracy was also of considerable significance getting public offices and land for services to the monarch. Formation of the feudal bureaucratic machinery, new for that period, by the end of that period became a specific feature.

**Territorial development** was determined by a considerable expansion of the country through unification after protracted

Figure 19.5

**A Strategic Matrix of Ancient China**



internecine wars in 1589 of North and South China, and also a seizure of a part of lands of today’s Korea and Viet Nam at the beginning of the 7<sup>th</sup> c. Assuredly, the Chinese state did not occupy such considerable part of Asia yet as today, but it was already one of the largest states of the world even then by size of its territory.

The most significant *natural resource* of that period was the sources of supply of water, land and sea.

All land was owned by the state represented by wang and distributed on the base of the allotment system. Peasants got ploughlands in a temporary use, and mulberry or garden and vegetable garden lands in a hereditary use and they paid for it by their labor and farming the lands of the wang or local feudalists. The Emperor granted lands in hereditary use to the latter, however, he had the right to take it back at any time. All sources of water supply were under control and owned by feudalists. A considerable advantage of ancient China (Empire Sui, and then Tang) before the neighbors was that the country owned most of water resources of the region that conduced to the development of agriculture underlying the state economy of that time.

China produced all necessary goods for the state both agricultural and craft.

As of the beginning of the 10<sup>th</sup> c. the *number of population* of China was estimated in 20 mln. people which brings the country close to the category of great powers of that time. A fast population increase was ensured due to a seizure of ample territories, and also active migration from the adjacent lands (mainly from Mongolia and Xinjiang) where the level of life was considerably lower than in the Heavenly Empire. An active assimilation of the incomers went, new and new towns were built.

Economy was based on the system of allotment land management. Peasants had to pay a state rent (grains, yarn and fabrics) and work at the state fields. The system of allotments ensured the stability of land management and conditions of efficient management and growth of labor efficiency while not destroying in actual fact large landowning and strengthening the dependence of peasants on the state.

A fast growth of population number and cities determined the development of the handicraft industry. It is in China where such industries as printing and large-scale production of powder developed. The Chinese succeeded a lot in sea-navigation, which was also promoted by invention of compass. The articles of craftsmen were removed faraway outside the country. All this determined a considerable growth of China's influence in the world.

*Culture and religion* developed under the influence of Buddhism, which spread wide from the middle of the 4<sup>th</sup> c. and throughout two further centuries (mainly in the North of China where by the beginning of the 6<sup>th</sup> c. there were about 30 thousand Buddhist monasteries where resided about 2 mln. monks). Protection on the part of the ruling class promoted the popularity of Buddhism.

Major philosophical schools of China: Confucianism, Taoism, Moism (teaching of philosopher of Mo-tzu) and Fei-tzu emerged already in the 6<sup>th</sup>–3<sup>rd</sup> c. B.C., developed considerably and assumed various trends.

*Science and education* began to develop in China already in the period of the Sui dynasty. In such significant issues as apprehension of nature and human as a complex, related systems, and also in the working out of a system approach to their study the Chinese science left behind fast European and Eastern one. Special focus was also placed on architecture, medicine, pharmacology, chemistry (invention of powder) and mathematics in the Heavenly Empire.

**Armed forces** represented regular horse and land formations armed with a lightweight weapon. Also, a kind of prototype of the navy was created. The level of training of the army which warred nearly non-stop throughout the 4<sup>th</sup>–6<sup>th</sup> c. was pretty high. Scientific inventions (powder) were employed for military purpose.

The Chinese military leaders conceptualized and revised the military operations practice into a high-class theory of a military art. Theoretical treatises on the art of war appeared first in the world that time.

The basic directions of foreign policy included ensuring security of their frontiers and unification with neighboring states, including peaceful ways — using diplomatic negotiations. Considerable development of diplomacy became one of specific feature of that period and one more considerable contribution of China to the advance of the world civilization.

Full values of the indicators of the strategic matrix of China of that and further periods are given in the summary table (*table 19.6, p. 336*).

### **19.2.2. China in the Middle Ages (end of the 6<sup>th</sup> — beginning of the 17<sup>th</sup> c.)**

In the reign of the Tang dynasty, which continued to 907, the empire strengthened even more. The emperors pursued the policy of centralization of power and expansion of the administrative system. In that period the feudal bureaucratic machinery assumed its final form that is based on the hierarchy of ranks and existed without special changes nearly until the 20<sup>th</sup> c. in China. The higher rank of the official, the larger plot of land he got for alimentation. The state machinery consisted of three chambers, six departments and many administrations. A special chamber of inspectors checked the performance of all institutions. The country was divided into ten large regions; and each of them — into counties and districts. In addition to the civil authorities, military governors who enjoyed certain independence were in the provinces.

In the Tang Empire the system of state exams (keju) was introduced. If they were taken successfully and a science degree was conferred, this opened access to public service to the man and holding of any office (according to the science degree conferred). There were nine ranks and three dozens of classes of officials in a total.

In that period the *territory* of the Empire reached enormous sizes. After long internecine wars the unification of the country was actually completed. In 630 the Chinese army defeated Eastern, and in 657 – Western Turkic Kaganates; lands of today's Mongolia and Xinjiang joined the empire. Many states to the west of Tien Shan recognized themselves vassals to China. In the middle of the 7<sup>th</sup> c. they established contacts with Tibet. In 668 after a 20-year struggle the lands of North Korea were conquered. By the end of the 7<sup>th</sup> c. the boundaries of China extended from the Pacific Ocean to Tien Shan, from the source of the Selenga river to Indochina.

*Natural resources* of the Tang Empire were very considerable. Apart from land and water they included the deposits of mineral resources – gold, silver, precious metals, various metals, coal and oil, saltpetre, sulphur etc. The same way as land nearly all sources of natural resources were owned by the state and in actual fact they represented government enterprises. Some of them the power leased out to private persons with a mandatory term to supply a part of resources mined to the fisc.

Stabilization of internal and external military political situation in the 8<sup>th</sup> c. caused a noticeable rise of *economy*. A growth of large landownership (including owned by military governors) became typical features of agricultural relations of that period as well as a further development of estate landownership, bondage of peasants. The practices of farming and fertilizing of lands improved, waterwheels began to be widely employed for irrigation of fields. New crop plants as tea, sugar cane, cotton etc. were introduced. Specialization of production appeared in the agriculture.

Public and private craft developed, cities – the centers of commerce and guild handicraft – grew. The first craft guilds («hang») united both craftsmen and merchants. Craftsmen manufactured paper, which had already been invented in ancient times, valuable sorts of silk fabrics and all kinds of metalware. China became the world monopolist in manufacturing of a number of products (paper, silk, tea etc.).

Domestic trade expanded, which was contributed by construction of channels that connected North and South China. Paper and the so called flying money (transfer checks) appeared and were actively used. Sea trade advanced; it drove trade mainly with India and Iran, Korea and Japan from the 8<sup>th</sup> c. Caravan tracks connected China with the Central Asia, Near East and Europe.

A vigorous economic growth and relative political stability became the reason for a fast growth of *population* number, which reached 40–60 mln. people by the 10<sup>th</sup> c.

This was a period of efflorescence of *culture and art* of China. The Tang period is viewed as the golden age of the Chinese literature: poetry, fiction short stories and journalism reached unprecedented heights. Printing promoted its development. China succeeded not less in the sphere of fine arts: local masters developed original principles and methods of graphical and sculptural representations which make independent trends in the world fine arts to this day.

A sacral sphere was of prime significance for the development of culture in China. Despite its widespread, Buddhism became neither the only, nor even prevailing religion and was combined with the ancestor worship, Taoism and Confucianism.

In the reign of the Tang dynasty *science and education* were marked by notable achievements that excelled the successes of other countries in that time.

Thus, builder **Li Chun** designed and built the Zhaozhou (Anji) bridge, the oldest single span stone bridge in the world, which still serves its original function. Buddhist monk **Yi Xing** measured the length of degree of the terrestrial meridian. In the book «One Thousand Supplementary Golden Recipes» («Qianjin Yifang») the recipes of ancient pharmacology were described in detail. Original thinker **Fan Zhen** wrote a treatise «On the Destructibility of the Soul» («Shen-mieh lun») where he confuted religious beliefs on the immortality of soul.

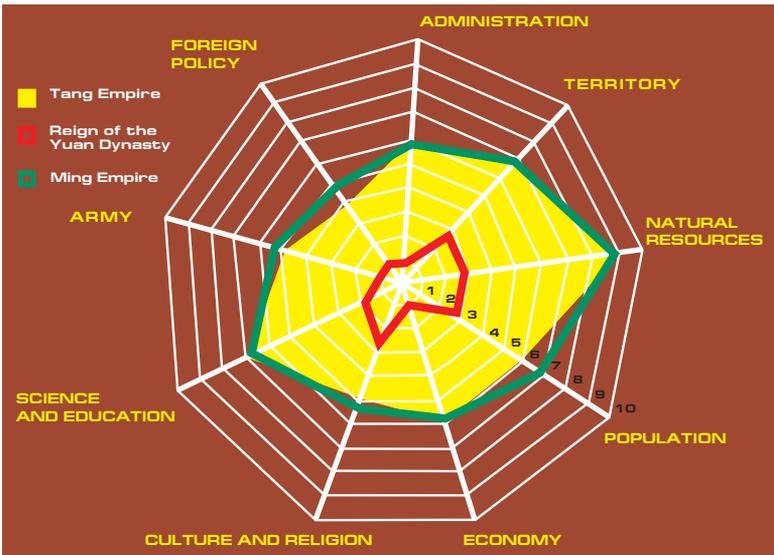
*Armed forces* of the Empire were most numerous, powerful and armed the best of all (including with cannons) against the troops of other countries of the region. Under support of the residents of Tibet the Chinese army made a victorious campaign on the Ganges. A theoretical comprehension of military art: experience of fighting many battles was summarized in several special treatises conducted to success of practical driving of wars.

A specific feature of foreign policy of China of that period, which further became its traditional feature for many years, was the apprehension of the empire as the middle state located between the earth and the heaven and the rulers of all other countries as vassals to the emperor. And desire to establish diplomatic relations with neighboring countries gradually wended down.

A strategic matrix of China of the Tang Empire is given in *fig. 19.6*.

Figure 19.6

## Strategic Matrix of China in the Middle Ages



It is apparent that the major geopolitical result of the reign of the Tang dynasty (despite obvious «home-base» direction of development of China, first of all by economic indicators, state of the armed forces and foreign policy) may be viewed the formation of the country as a great power by the 9<sup>th</sup> c.

However, its development was strongly impeded by the struggle between the central power and governors on the periphery, which intensified in the middle of the 7<sup>th</sup> c. (who were often appointed from among military leaders of a non-Chinese origin). The result of such struggle was weakening of the centralized system of administration of the Tang Empire and a decline of its military power. The peasant war of 874–901 finally undermined the strength of the state.

The disunity period of the country and struggle between various feudal groupings (907–960) is called Wu-tai («The Five Dynasties»). In 960 after the rising in rebellion and pulling down the Late Chou dynasty (951–960) **Zhao Kuangyin**, warlord founded the Song Empire (960–1279).

The Song dynasty lost its dominance not only over a considerable part of former vassals on the non-Chinese territory, but also

over territories of China in the North and Northwest, which passed to the Liao state. Furthermore, the Song Empire paid silver and silk tributes to it.

Even bigger territory had to be given in the 12<sup>th</sup> c. to the Jurchens, who invaded China. In 1125 they established the Jin state based on the Liao Empire destroyed by them. The territory of the empire ran by the river Huang He. After capturing of Kaifeng, Song capital, by the Jurchens in 1127 the rulers of the Song escaped to the South, beyond the river Yangtze, and since that time the dynasty got the name Southern Song. In 1141 a peaceful treaty was signed, under which the Song Empire recognized itself a vassal to the Jin state and undertook to pay a large tribute to it.

The invasion of the Mongols on China, which began in the first decade of the 13<sup>th</sup> c. ended with conquering of all China by 1279 and destruction of the Song Empire. The Mongols had earlier conquered states Xi-Xia (1227) and Jin (1234). From 1271 to 1368 China and Tibet fell under the power of the Yuan Mongolian dynasty.

Discussing this period of the Chinese history it is possible to speak that the existence of China as an independent state terminated for a long period of time — until 1368. Only as a result of a continuous national liberation struggle against the Mongolian dominance, which embraced the whole country by the middle of the 14<sup>th</sup> c. and continued about 20 years the Mongols were ousted from China. The Ming dynasty came to power.

In the Ming period (1368–1644) efficient *state administration* was restored again in the country, a rigid Emperor's power on the model of the Tang dynasty.

The Ming Empire pursued aggressive *foreign policy* and subdued a number of the Jurchen tribes in the northeast. In the Southeast Nanzhao state conquered earlier by the Mongols, a part of provinces of Qing Hai and Sichuan fell under the Ming power. The Ming Emperors tried to extend their influence on the area of the southern seas and the Indian Ocean where in 1405–1433 seven sea expeditions were sent.

A breakdown of the Tang Empire, oppression of conquerors and constant conflicts of local princes, ruining of economy and a growth of a number of epidemics slowed down the population increase rates of the country. Nevertheless, by the time when the Europeans penetrated into China (in 1516 the Portuguese first landed here, and in 1557 Portugal got the right of lease of the

Amin province renamed to Macao by the Europeans), its population is estimated in 80–100 mln. people.

In the second half of the 16<sup>th</sup> c. first European missionaries (Catholics, and then Protestants) appeared in China, and they exerted every effort to convert locals into Christians. However, their actions failed. The major *religions* of China still remained Confucianism and Buddhism organically fused with traditional ancestor worship by that time.

Let's mention the formation of major principles of traditional Chinese medicine, and also the development of philosophy as the most known *scientific achievements*.

The development of *armed forces* in China of that period was determined by a desire of the state to restore its capabilities to the level of the Tang period, and also under the influence of the Mongolian conquerors. Under the same quality of armaments in actual fact the Chinese army considerably outperformed the military of any state of that period by number — and according to some estimates only a regular part of ground forces numbered at least 1 mln. people in the 16<sup>th</sup> c. Furthermore, China maintained a large in number navy. Admittedly, despite an obvious advantage of the fleets of other states of the region, it was next in many ways to the fleets of the European states with their multiple cannon vessels with square sails, and consequently with a considerably better maneuverability.

Let's note that from that period one of the major features of the Chinese military art persisting to this day became the desire to prevail over the adversary without a direct military clash. Further these views will produce a considerable influence on the development of the European military art in the 18<sup>th</sup>–19<sup>th</sup> c.

The evaluation of the Ming Empire (in its heyday period) by the indicators of the strategic matrix see in *fig. 19.6*.

### 19.2.3. Modern History of China (17<sup>th</sup> — beginning of the 20<sup>th</sup> c.)

At the beginning of the 17<sup>th</sup> c. the Ming Empire entered a spell of a deep-seated crisis caused by aggravation of internal contradictions, struggle of ruling groupings and attacks of the Jurchen tribes inhabiting South Manchuria (in 1585–1619 they were united around the Manchu possession and called the Manchu since then). The peasant revolts which burst out countrywide transformed into a regular peasant war in the 20–30s of the 17<sup>th</sup> c., and the Ming

dynasty was deposed. In struggle with the rebels a part of the Chinese feudalists conspired with the Manchu and opened the frontiers for their troops. As a result the risings of people were suppressed, but China fell under the power of the Manchu conquerors who established the Qing dynasty (1644–1911).

The Qing dynasty retaining the previous practice of *state administration* in actual fact redistributed the land reserves: the land of the Ming nobility and some of the untitled Chinese landowners passed to the Manchu Emperor's house and the Manchu aristocracy. In alliance with major Chinese feudalists the latter established the monarchy of a despotic type resting on the army and bureaucratic state machinery. The supreme bodies of power and the army leadership were in the hand of the Manchu.

The major contradiction of *foreign policy* of China of the Qing period is a combination of principles of isolationism and expansionism. A desire to isolation from the outer world also slowed down the growth of *economy*, the rise of which renewed only from the end of the 17<sup>th</sup> c. At the end of the 18<sup>th</sup> c. its indicators had already exceeded the level reached on the eve of the Manchu Conquest. Foreign trade had a considerable impact on economy, and its base was trade in tea and silk at that period.

Already in the period of the dominance of the Ming dynasty there were established ties of China with Russia, which desired to maintain regular diplomatic relations and to establish a regular trade with it (sending of Cossack **I. Petlin** in 1618 to Peking by the Tobol waywode, a trip of Cossack **E. Vershinin** to China in 1641–1642). After the Qing Dynasty came to power in China these attempts continued (the embassies of **F.I. Baikov** in 1654–1657, **I.S. Perfilliev** and **S. Ablin** – in 1658–1662, **Spafaria** – in 1675–1678), but they did not bring positive results. In the 50s and 70–80s of the 17<sup>th</sup> c. the Qing dynasty attempted unsuccessfully to seize the lands in the basin of the Amur (Amur region). Throughout centuries the territories on the both shores of the river did not belong to anybody, but at the beginning of the 17<sup>th</sup> c. they were mastered by Russian pathfinders. In 1689 the Qing government made Russia to sign a so-called Nerchinsk Treaty under a direct military threat. Under it Russia gave to the Qing Empire its possessions on the right shore of the Argun river and parts of the left and right shores of the Amur. The Treaty of Kyakhta in 1727 established the border between the Qing and Russia in the area of Mongolia conquered by the Manchu and confirmed the unlocated territory in

the area of the lower reaches of the Amur and the Okhotsk coast. The border of Russia and China in the Far East was finally determined under the Aigun Treaty of 1858 and the Peking Treaty of 1860. The Sino-Russian territorial demarcation of the Central Asia was completed by the middle of the 90s of the 19<sup>th</sup> c.

The western European countries (Portugal, Holland, France and Great Britain), which attempted to establish official relations with the Qing Empire in the 17<sup>th</sup>–18<sup>th</sup> c. failed (as well as Russia's), however they were authorized to trade on a regular base with Guangzhou. From the end of the 18<sup>th</sup> c. these states, first of all Great Britain, intensified their pressure on China again trying to «open» it and use as a market for a sale of their goods.

Pursuing an expansive policy the Qing Empire considerably extended its *territory* during the **Kangxi** Kindgom (1662–1722) and the **Qianlong** (1736–1795). At the end of the 17<sup>th</sup> c. North Mongolia was conquered (South, or Internal Mongolia had already been conquered by the Chinese in 1636). In 1757, the Qing destroyed the Dzungar Khanate and included its territory together with Eastern Turkestan conquered in 1760 in it under Xinjiang («New Border»). After a number of campaigns of the Chinese-Manchu army on Tibet, this area was also annexed to the Qing at the end of the 18<sup>th</sup> c. However, invasive wars of the empire on Burma (1765–1769) and Viet Nam (1788–1789) ended with a defeat of the Qing.

Despite non-stop wars the *population number* considerably increased in the Qing period in China and by the middle of the 18<sup>th</sup> c. it made about 200 mln. people, and in 1840 during the first «Opium war» already 410 mln. people resided in the country according to the census.

A specific feature of the organization of the *armed forces* of that period was a division of the army into the troops of the central subordination, the backbone of which was so-called «The Eight Banners» (other name — «Banner-bearers») and forces of local, provincial subordination. A division was based on the principle of financing the maintenance and training of the troops by central or local power. Another significant point was that under a considerable lagging behind of China from Europe in technologies of weapons manufacturing, it got an opportunity to purchase directly the weapons from its European trade partners. However, in general the level of fighting efficiency of the Chinese army was low. Even «The Eight Banners» mainly equipped with cold-arms considerably yielded to regular troops of the European countries by its fighting capabilities.

General indicators of the strategic matrix of China in the 18<sup>th</sup> c. are shown in *fig. 19.7*.

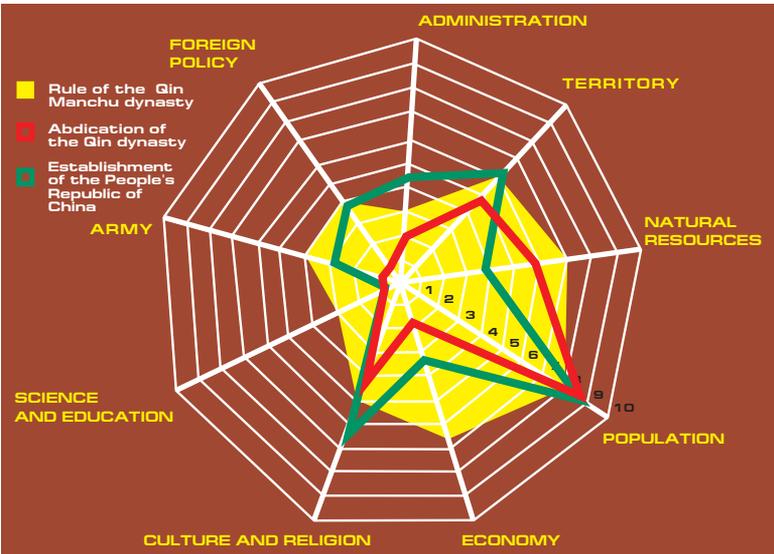
A considerable reduction of the level of the endowment of the empire with *natural resources* in that period is accounted for by a shortage of silver acting as a major money equivalent in trade with the Europeans, which reached considerable volumes, and also a dependence of this trade on the supplies of opium.

Apparently, the ruling of the Manchu told sharply negatively on the development of China. This crisis period continued until the middle of the 20<sup>th</sup> c. and throughout it all indicators of the strategic matrix, except population number and territory (actual territorial losses were inconsiderable) continued falling.

In the second half of the 18<sup>th</sup> c. the Qing Empire decayed. Internal contradictions aggravated sharply. The state machinery was immoralized by corruption; the army equipped with outdated types of weapons and with bad training and skills was unable to defend the country efficiently, especially under a threat of intrusion of Great Britain and other European powers (including Russia). The anti-Manchu revolts became a sign of crisis of the Qing Empire, and the largest one included commotions of 1796–1805, which

Figure 19.7

**Strategic Matrix of Modern History of China**



embraced the provinces of Sichuan, Hubei, Shaanxi, Henan and Gansu, and in 1813–1814 the provinces of Jilin, Shandong and Yunnan.

In 1839, the Anglo-Chinese relations assumed especially tense character, and it resulted in the first «Opium war» of 1840–1842. The lagging of China in terms of military predetermined its defeat. On August 29, 1842 the Nanking Treaty was signed, under which China undertook to pay contribution and deliver the island Xianggang (Hong-Kong) to Great Britain, open five ports for the English trade, establish reduced customs tariffs. Under an additional protocol of 1843 the Englishmen got some more privileges (the right of extraterritoriality, right of concession and the principle of the most favored nation). In 1844 China had to sign the agreements with the USA and France under which they enjoyed the same privileges. A defeat of China in the war against Great Britain and treaties imposed on it inaugurated the beginning of its transformation into a semi-colony. The execution of the Tientsin (1858) and Peking (1860) Treaties with Great Britain as a result of the second «Opium war», and also similar treaties with other European states and Shimonoseki (1895) treaty with Japan finally undermined the strength of China.

Apprehending the strengthening of influence of Great Britain in China and seeking to ensure its interests Russia executed the Aigun (1858) and Peking (1860) Treaties and Tientsin Treaty (1858) with it. These instruments determined a new outline of frontiers (valid mainly to this day), and also extended to Russia the same benefits and rights that had been granted to Great Britain and other European powers.

Aggravation of economic crisis, stranglehold of foreigners and capitulationism of the ruling dynasty became the reasons for discontent of thousands of the Chinese. The nascence of a revolutionary-democratic movement in China headed by **Sun Yat-sen** fell to 1894. In 1895–1898 a liberal-reformatory movement of the Chinese bourgeoisie and major landowners assumed large scale. A further worsening of internal political, social and economic situation caused by a growth of taxes related to the necessity to pay contribution to Japan, arbitrariness of foreigners and their interference in internal affairs and traditions of China found expression in a large revolt in 1899. Intervention of the imperialistic powers (Great Britain, Germany, Austro-Hungary, France, Japan, the USA, Russia and Italy) became a response to it and ended with the execution of the

Boxer Protocol on September 7, 1901, which fixed a semi-colonial status of the Qing Empire.

The policy of the Qing court was controlled by foreign councilors who employed diplomatic, military and financial levers. Troops and fleets of the European countries were based in the key cities and ports of the country. A total amount of foreign investments grew from USD 800 mln. to 1 500 mln. for the first decade of the 20<sup>th</sup> c., and invested capital consisted mainly of profits generated by foreigners in China as a result of exploitation of its resources. The import volume of fabrics exceeded the export volume from China nearly 10 times; import of the US cigarettes ruined national tobacco production.

The interests of industry, bourgeoisie of China came into acute collisions with omnipotence of foreign councilors and firms in the country, and also conservatism of the ruling establishment of the Manchu and Chinese feudalists. Changes in economic and social structure of society, on the one hand, and a semi-colonial status of the country, on the other hand, led to aggravation of political struggle. All this gave an impetus to the Xinhai revolution of 1911. Its results were the abdication of the Qing dynasty on February 12, 1912, abolishment of the monarchy and division of the country into two independent states – North China and South China with their own governments and capitals, in Peking and Guangzhou, respectively.

During World War I Japan intensified sharply its expansion in China. On January 18, 1915 it issued the «Twenty-One Demands» to it, which actually constituted an extended plan for transformation of China into the country dependent on Japan. Most of these demands were recognized by the Chinese government.

The victory of the Great October Socialist Revolution in Russia affected a lot the pace of the contemporary history of China. By declaring all secret treaties executed by the tsar and bourgeois Provisional Government with Japan, China and former allies of Russia invalid, the Russian government in its «Address to the Chinese people and governments of South and North China» dated July 25, 1919 proposed that China should enter into negotiations on cancellation of the Sino-Russian Treaty of 1896, Peking Protocol of 1901 and all agreements of Russia and Japan with respect to China from 1907 to 1916. In 1923 the Soviet government established friendly relations with the government of South China headed by **Sun Yat-sen** at

that time. Under his request the USSR rendered assistance in the establishment of the National-Revolutionary Army (NRA) of South China and sent councilors and weapons to Guangzhou. Diplomatic relations between the USSR and North China were established on May 31, 1924 after the Agreement on General Principles for the Settlement of the Questions between the Republic of China and the Union of Soviet Socialist Republics was signed and in pursuance of which the USSR restated its waiver of all gains that tsar Russia enjoyed in China.

In response to the shooting of patriotic demonstration on May 30, 1926 by the Anglo-American police demonstrations and political strikes that laid the foundation of national revolution taking place in the form of the so-called civil revolutionary wars were held in Shanghai and many cities of China. The first of them continued till 1927. On July 1, 1925 the government in Guangzhou proclaimed itself the National Government of China, and in 1926 the NRA of South China established the revolutionary power in the provinces of Guangxi, Guizhou and southern part of Hunan. In July 1926 NRA began the Northern campaign in order to ensure victory of the revolution in all China.

1927–1936 entered the history of China as the years of the second civil revolutionary war. A part of the leadership of South China (right wing of the Kuomintang headed by the commander in chief of the NRA **Chiang Kai-shek**) scared by the scale of the revolutionary movement, organized coups in Shanghai and Nanking in April 1927, and then in Guangzhou. On April 18, 1927 Chiang Kai-shek formed a new National Government in Nanking. The Communist Party of China was proclaimed an outlaw, trade unions and peasants unions were dissolved. Persecutions and shootings of communists and activists-revolutionaries began. Those who survived escaped to the rural areas where the detachments of the Red Army of China and local seats of revolutionary democratic power called the Soviet districts were formed under the guidance of the Communist Party of China. During 1928–1930 15 Soviet districts were established on the territory of 11 provinces, mainly South and Central China. In November 1931 in Juichin (province Jiangxi) the 1<sup>st</sup> All-China Congress of the Soviets of China was held where the Central Executive Committee and Provisional Central Government of the Soviet republic of China (SRC) were elected

and also a draft constitution of the SRC was adopted. In 1930–1933 the Red Army of China repulsed four major campaigns of the Kuomintang troops.

At the end of 1931 the Japanese troops occupied Northeastern China and established a puppet state Manchukuo headed by the last emperor of the Qing dynasty **Pu Yi**, who abdicated in 1912.

On December 12, 1932 diplomatic relations between the USSR and China were restored. The same year the Japanese troops continued advance seeking to conquer Shanghai, however they were stopped by a patriotically minded Kuomintang 19<sup>th</sup> army supported by voluntary detachments of the citizens-in-arms. The government of Chiang Kai-shek not resisting the Japanese occupation actively struggled against the Communist Party of China and the Red Army of China. As a result Japan considerably expanded its possessions in North China.

Under conditions of mounting activity of the anti-Japanese movement the Communist Party of China declared its readiness to terminate the struggle against the government of Chiang Kai-shek and appealed to the Kuomintang to establish the United Anti-Japanese Front. Under pressure of the people and a part of the army the leadership of the Kuomintang ceased military operation against the Red Army of China at the end of 1936. In July 1937 Japan attacked China again, conquering fast vast areas, including such large cities as Peking and Shanghai.

The international situation that changed drastically with the entry into World War II of the Soviet Union opened favorable outlooks for the development of national-liberation struggle in China, consolidation of the Communist Party of China and extending its influence in the country. Despite the government of Chiang Kai-shek still pursuing the policy of passive resistance to the aggressors, the struggle of the Red Army of China and Japanese troops was of an active character, and after the beginning of war in the Pacific Ocean its scale and severity increased even more.

A period of 1945–1949 was called the Third Civil Revolutionary war in China. The Red Army of China administered a crushing defeat upon the Japanese troops and forces of Kuomintang. On October 1, 1949 the establishment of the People's Republic of China was proclaimed in Peking. The Kuomintang government headed by the Chiang Kai-shek escaped to Taiwan taking nearly all navy and a larger part of civil fleet with it.

### 19.2.4. Contemporary History of China (from 1949)

The Communist Party of China that undertook the administration of the country after the formation of the People's Republic of China advanced a slogan of building of socialism in the country. The Soviet Union was the first state to recognize the PRC. In February 1950 the Soviet-Chinese treaty of friendship, union and mutual assistance was signed, and also agreements on transferring of all rights to the People's Republic of China by the Soviet Union to manage jointly the Chinese Changchun Railway, withdrawal of the Soviet troops from the naval base of Lushun (Port Arthur) and extending a long-term loan on preferential terms to the People's Republic of China.

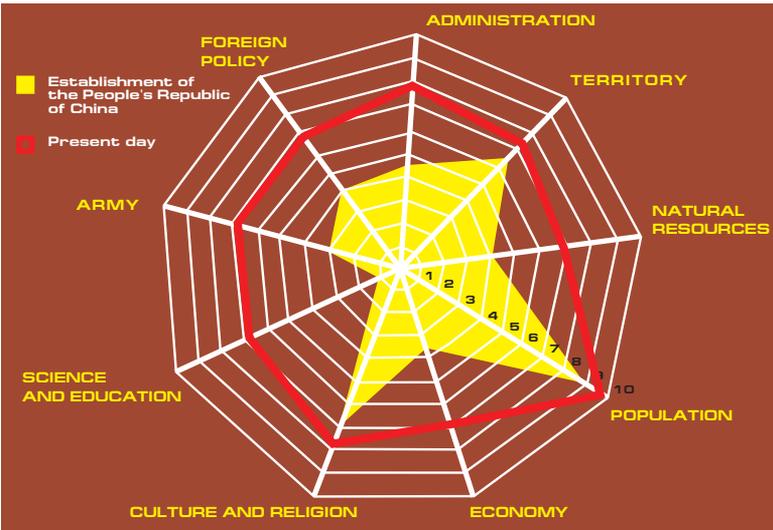
In 1951 the territories of China (except Taiwan and Panchhuledao) were fully liberated from the Chiang Kai-shek troops. In actual fact, a new period in the history of China runs from this time. By 1952 the government of the People's Republic of China had mainly formed the authorities of state-administrative government of the country, established state control over foreign trade, nationalized banks, heavy industry and transport. By the beginning of 1953 the agricultural reform was completed in the PRC (except several districts).

Economy that was ruined by wars was gradually restored. The volume of industrial production for the first five-year plan (1953–1957) increased 2.3 times. A number of new branches of the industry of prime significance were created anew: aircraft, automotive, machine-tool and machine-building, chemical, defense industry etc. A gross yield of food crops increased by 22%, cotton picking – 26%. Welfare of population improved noticeably, including its cultural level. The network of educational establishment considerably expanded.

A planned development of China was violated by the attempt to implement the ideas of the «Great Leap Forward» (1958–1960) set forth by the leadership of the People's Republic of China and «cultural revolution» (1966–1976). Economic development of the country slowed down, many production capacities were put out of commission, output of industrial and agricultural production reduced sharply. In this connection the leadership of the PRC had to take measures in 1961 for economic «settlement», i.e. in actual fact to renounce an idea of the «Great Leap Forward». The new leaders of China who came to power in 1969 as a result of a protracted internal political struggle proclaimed that China would be

Figure 19.8

**Strategic Matrix of Modern China**



governed by the principles of peaceful co-existence, the UN Charter and other international rules in its foreign policy in order to withdraw the country from international isolation and consolidation of its positions in the world. It permitted for the country to normalize diplomatic relations with a number of the states on the planet in 1969–1972. In October 1971 the 26<sup>th</sup> Session of the UN General Assembly restored the rights of the People's Republic of China in the UNO and Security Council. Western countries, first of all the USA and Japan, became major foreign economic partners of the PRC.

After removal of the «Great Leap Forward» effect the government of China managed to return the country within a relatively short period to the course of a stable economic development using advantages of highly centralized planned administration. A special impetus to such process was given in the 80s of the 20<sup>th</sup> c. when the implementation of the «Four Modernizations» program began.

The estimation of modern China by indicators of the strategic matrix is represented in *fig. 19.8*.

**System of administration.** By the middle of the 20<sup>th</sup> c. a new state formed on the territory of China – the People's Republic of China, which all continental part of the country and most of islands

owned by China. A specific feature of modern state administration of China is the presence of three various systems of organization of power on its territory, which allows speaking about it as the country with three forms of administration and three political systems. This is a partocracy state system on a larger (continental) part of the country; a democratic system that is different from it, with delegation of a part of authorities of the central power established in special administrative districts, autonomous units as a part of the unitary state; presidential-parliamentary republic with a multiparty political system – in the Republic of China on Tainan and Peggahu islands (Pescadores), and also two small groups of islands that are included in the province of Fukien administratively – Jinmen and Mazu. All these insular territories were occupied by the troops of Kuomintang under the leadership of Chiang Kai-shek defeated and evacuated from continental China.

**Economy** of China, beginning from the 1970s is the most dynamically developing one in the world. According to the plans of the country's leadership, China's GDP should increase double by 2010 against the same indicator in 2000. Along with that it should be noted that disproportion in economy of the country increases, a low efficiency of its governmental sector persists. In future it is likely to tell negatively on the development rates of the country. Economic transformations that are carried out mainly by extensive methods aggravate social tension, property differentiation of society. Nevertheless, the results of growth of Chinese economy will be quite impressive in the near decade by estimates of specialists – by 2015 the industrial output in China will exceed the same US indicator 2.8 times. Taking into account production of up to 70% of some types of world electronic products on the territory of China already at the beginning of the 21<sup>st</sup> c., and the fact that China is included in the five countries with the largest gold-exchange reserves, the extent of its impact on the world economy becomes even more apparent, especially after the accession to WTO.

**Natural resources.** By number of types and amounts of mineral reserves China belongs to the number of the most endowed countries of the world. The richest deposits of coal, iron ore, tungsten, tin, antimony, lithium, vanadium, pyrite, zinc, titanium, copper, aluminum, lead, molybdenum, manganese, chromium, mercury and phosphates are found on its territory. China occupies the first place in the world by mining coal, fifth – by production of oil and sixth – by gold mining. Let's note that although large deposits of oil are

available in the country, and also world's largest reserves of water and coal, a deficit of energy has already become a serious problem for a growing Chinese economy. Thus, according to some estimates, the proved oil reserves will be enough for not more than 17–20 years provided that today's production rates persist. China has already turned from exporter to a large importer of oil. By 2020 the energy carriers requirements will be covered from own sources for not more than by 1/3, and according to other estimates – by 1/4.

In 1949, when the People's Republic of China was formed, its **population** number made 540 mln. people. By the end of 2003 this indicator reached 1.29 bln. people, i.e. about 20% of the Earth residents. As a result of the policy towards population control that is pursued by the government, population growth rates have slowed down, presently the average annual population increase makes 13 mln. people.

**Culture and religion** develop under the influence of Confucianism that still renders a tremendous influence on public conscience, and also Buddhism, Taoism and the ancestor worship. Various trends of Christianity are more or less popular only in special administrative districts of China.

The principle of freedom of religion was violated in the period of «cultural revolution» when many religious organizations were liquidated, temples, mosques and churches were closed or ruined; religious activity nearly ceased. It renewed only after 1976.

**Science and education.** After the establishment of the People's Republic of China a new system of education was formed in the country. Now the number of educational establishments is 3.3 times higher than in 1949. Today science in China develops at high rates. Nuclear power industry, rocket engineering, computer technologies, development in the field of semi-conductors, electronics and means of automated control have been determined as the major priorities. Successful exploration of space continues. Nevertheless, only medicine may be marked from sciences where China has achieved the results of world significance. In many other fields the Chinese science is in the situation of the overtaking for the time being.

China has the largest **armed forces** in the world, which include apart from ground forces, air forces and navy, also a full-fledged strategic nuclear triad (the third place in the world by number of carriers and warheads after the USA and Russia). According to estimations of the western analysts China allocates annually about 2% of GDP for military expense that makes at least USD 40–50 bln.

(official Chinese data – about USD 20 bln.). Furthermore, the funds for modernization of weapons are regularly allocated from the budget of the country. It allows the military-political leadership of China implementing successfully a long-term plans for reforming the army s to make it one of the world leaders by the level of fighting capabilities.

**Foreign policy.** A foreign policy of China assumes a great power character. In the near prospect Peking is interested in the maintenance of peace and stability in the Asian-Pacific Region. Along with that expansive desires of the Chinese leadership increase, and traditional ideas of «Sinocentrism» underlie them as well as a recently developed concept of «strategic boundaries and living space». Its gist is that it is necessary to increase «living space» of the state within framework of «expanding strategic boundaries» that may not coincide with state, for the implementation of base national interests such as all-round development and security. The sizes of «living space» and «strategic boundaries» are determined, namely, by the capabilities of the army, which is able to ensure protection of national interests. This is one of major tasks of the armed forces.

In the foreseeable future the major tasks of foreign policy of China include:

- ➡ to ensure favorable external conditions for successful modernization of the country;
- ➡ to strengthen influence of Peking in world and regional affairs;
- ➡ to make the West expand trade-economic links with China, including the increase of capital investments in Chinese economy and the lift of restrictions on import of advanced technologies.

A strategic matrix of China of the beginning of the 21<sup>st</sup> c. is given in *fig. 19.8*.

Thus, the major geopolitical result of development of China in the period from 1949 may be viewed as its transformation from a semi-colonial state into a great power, which has already set a base for claiming the status of world.

### 19.2.5. Outlooks of China for the 21<sup>st</sup> Century

The rise of China to the status of the world power will considerably change the structure of international relations. This process started already in the 80s, but it manifested itself most graphically at the end of the 20<sup>th</sup> – beginning of the 21<sup>st</sup> c. against the

background of disintegration of the USSR and high development rates of China.

**System of administration.** Under conditions of increasing deideologization of the Chinese society it is the ensuring of a further economic growth that has become the major factor legitimating the power of the Communist Party of China. If the development rates of the country slow down through any reasons, this might cause disappointment of the population and cast doubts on the right of the party to power. However, a skilful activity of the party leadership and traditional mentality with respect to any central power makes this option of development unlikely.

Although the Communist Party of China is both a steward and a brake of political changes now, it is likely to retain its «leading and guiding role» in the life of China. It is confirmed by the ability of the government of the country to maintain traditional ideological guidelines and pursue a realistic line in the management of economy, and also by a well-regulated process of changing of aging state leaders in China.

Of course, the maintenance and successful activity of today's political system under its certain modernization is not guaranteed at all. However, all indicates that party and state administration of China works purposefully and efficiently, and the whole country develops actively.

**Territorial development.** Since the establishment of control over Tibet (1950) the People's Republic of China expands its territory steadily. Thus, Aomin (Macao) and Xianggang (Hong Kong) that became special administrative districts have come under jurisdiction of Peking recently. Further, as the might of China increases, this tendency is likely to persist.

Before 2015 the major task and most considerable territorial problem of China, according to its leadership, is the return of Taiwan. The gravity of the issue is strongly confirmed by recurrent statements on the highest level on the readiness, if the situation requires so, to take recourse to military force. It may be assumed that before Taiwan comes under the jurisdiction of Peking, and also some time thereafter, the activity of open Chinese expansionism in other directions is unlikely. Further, the most probable one will be, apart from inconsiderable disputable territories in the Asian-Pacific Region (Paracel Islands, Spratly etc.) the territories of the Russian Amur areas and seaboard, and also western areas of Kazakhstan.

And it is not necessarily at all that such expansion will be performed by a military way. In view of the traditions of a peaceful («crawling») expansion that has been formed for the recent two-three centuries and especially noticeable in the second half of the 20<sup>th</sup> c. — beginning of the 21<sup>st</sup> c., and also the ability of China, which is confirmed by a millennial history to self-identification and assimilation of other peoples in it, this may occur, if not quite natural and in a peaceful way, but at least without unleashing large-scale battles.

A disintegration of the People's Republic of China, even if the system changes, appears unlikely. First, such institutes as the Communist Party of China and National-Liberation Army of China continue efficiently to perform the integrating functions. Second, the tendencies of regionalism persisting from the end of the 20<sup>th</sup> c. and based on the awareness of their own interests by the local elite will be considerably mitigated both by neutral tendencies of depressive regions (as they are) and intensifying rates of economic integration. In any case it is obvious that the Chinese government is able to keep under control Tibet and Xinjiang Uygur Autonomous Region no matter how long resting on the army and repressive machinery, and measures applied to economic development of these regions and a change of the national structure of population will contribute to scaling down this severe problem.

**Natural resources.** High growth rates of economy and GDP output in China in foreseeable future will considerably increase consumption of all types of raw materials and energy carriers, and access to them will become one of the prime issues for the country. Thus, according to the estimates of the Chinese specialists, from 45 types of major mineral resources their own reserves will be enough only by 24 types to 2010, and by six — only to 2020.

The prime issue will remain the development of the energy industry. According to forecasts, the consumption of primary energy may increase more than one and a half time by 2020. As the «world commodity factory» China will occupy the first place by power consumption outgoing the USA. Major discoveries and new technologies, especially in nuclear and hydrogen energy industry may influence the development the fuel and energy complex considerably. China will remain one of the largest world importers of oil and gas, and many other raw material products.

Although China is one of the world leaders by the volume of water resources, the problem of water supply of population will

aggravate during the 21<sup>st</sup> c. in the country. It might be anticipated that this problem will become graver than the problem of energy carriers. Many large administrative centers of China — Peking, Shanghai, Lanzhou, Chengdu, Xianggang etc. — don't have enough water supplies.

The environmental issues will assume special significance. An environmental stress has already exceeded permissible indicators. Under such conditions any step forward will require more efforts from the Chinese than before.

Nevertheless, in view of the challenges of other developed countries in this field, China will still remain a great power in future, and by certain indicators it will get the status of a super power (first of all, by the reserves of ferrous, non-ferrous and rare-earth metals, coal, gold, forest, spaces for communications etc.)

**Population.** On the threshold of the 19<sup>th</sup>–20<sup>th</sup> c. a traditional point of view on the population as a source of well-being and might of the nation prevailed among public figures and scientists in China who were concerned about the outlooks of the development of the country. The views of the advocates of numerous population rendered their influence on the theories of population that spread after the establishment of the People's Republic of China. Thus, a variety of factors — geographical, religious and ideological nature — promoted a regular growth of the population number in China throughout many centuries.

A growth of the population number of China by the middle of the century will also be determined by an increase of a life span. If today's population increase rates persist, then it might make 1 bln. people for the next 70 years; i.e. a total population size of the country will considerably increase 2 bln. people. In this connection the government of China continues taking measures for control over the birthrates. According to the UN forecast, the population numbers in China (under the middle variant of the forecast) will increase up to 1,450 mln. people by 2030, and it will drop up to 1,395 mln. by 2050.

At the same time migration of population to neighboring countries will considerably increase, which is one of hidden directions of the governmental demographic policy, whose objective is to mitigate the acute problem of internal overpopulation and increase the level of influence of China abroad. A gradual assimilation of the Tibet people will occur.

**Economy.** According to the estimates of the World Bank China will occupy the third place in the world by volume of economy after the USA and Japan. The application of the purchasing power parity as a more objective indicator permits some researchers to assume that GDP of the People's Republic of China has already reached approximately 35% of the US level.

The People's Republic of China has demonstrated phenomenally high growth rates until now — on the average 9.1% per annum throughout the latest 25 years.

It is natural to assume that super optimistic forecasts of transformation of China into the leading economic power of the world by 2010–2015 will prove to be wrong through objective reasons. The USA is likely to retain the economic leadership longer than it was considered not long ago. However, it may be stated that despite obvious difficulties China returns gradually its traditional status of a major economy of the world.

However, it should be noted that the «scissors» between the volumes of economies of China and Russia are likely to increase. Even if it is assumed that the growth rates of China will drop by 6%, and a stable growth will persist in Russian on the level of 6% per annum, a gap between two countries by the GDP output may reach ten times by 2080.

**Culture and religion.** In the near future a rise in the sphere of education, and then a cultural efflorescence similar in many ways to a period of an originaive rise of the end of the Tang period is quite probable. First of all, the conception of the Chinese about their place in the world will change. The tendency to isolation is in China originally. But it is not unsociability, but probably a cultural independence.

Along with that it should be mentioned that the Communist ideology gives way not to traditional ethic-moral values and rules, but to individualism and consumerism in consciousness of the Chinese people of today.

A growth of national awareness may become the base of a new cultural rise. The redelivery of Hong-Kong in 1997 became a symbolic end of the period of the western superiority. For the first time from the beginning of revolutionary upheavals in 1910 the Chinese apprehended themselves as a single nation, felt pride in their national and cultural heritage. A growth of nationalistic sentiments is observed not only with the elite of society, but among ordinary people. The growth of influence of the Chinese culture on the world

civilization may be forecasted with confidence as ethnical Chinese increase worldwide.

**Science and education.** Intellectual traditions of China, many scientific and engineering schools of the country, large population numbers and a well-built system of education guarantee China substantial achievements in science, and consequently a base for a long-term economic upturn and development of a military potential.

The analysis of distribution of the funds earmarked for financing of scientific researches allows speaking that in future China will achieve successes in such applied fields as space exploration, nuclear processes control, medicine etc. In fundamental researches the following may be mentioned as major lines the physics of high energy and solid bodies, molecular biology, cytology, gene engineering, neurophysiology, applied mathematics, system engineering, astrophysics, inquiries into the processes of circulation of atmosphere and also full-scale oceanographic researches.

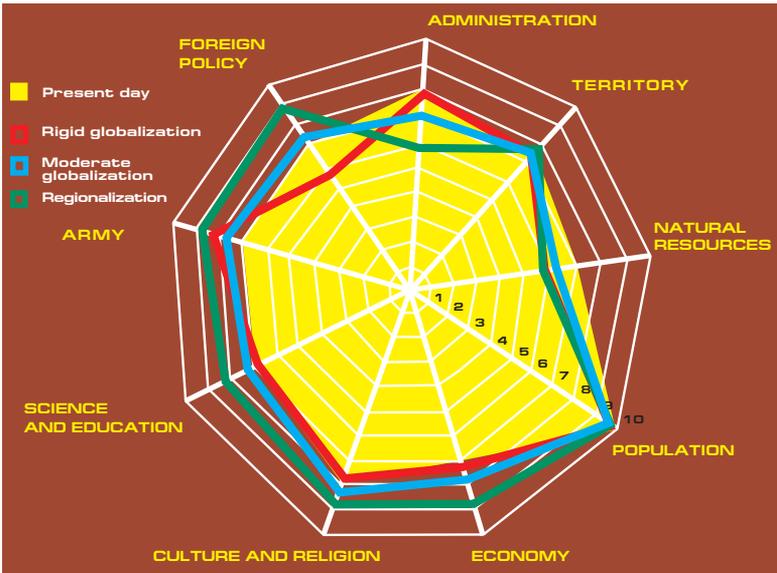
According to the statements of the Chinese specialists their task is in making education an independent value for the Chinese youth, to turn it into one of the indicators of life success. It is anticipated that the Chinese science will be able to augment its potential in the near 50 years through it.

**Armed forces.** In its upsurge China places its stake on an economic might as a base of a total national might. Military modernization does not occupy the first place in the general plan on the transformation of China into a modern state. At the same time it is obvious that the increase of economic might of the country means an increase of resources that may be channeled to the needs of defense.

The major objective of China's military policy so far is to create the army that is in line with the armed forces of the «world power» and able to ensure protection and pursuance of the interests of the country in any region of the planet and in space. In view of ranking the Chinese army so far in the number of the world leaders by the level of its capabilities, its modernization rates, large volume of funds earmarked for such purpose, and the leadership of the country has a strong political will, it may be stated that China has all chances to affect its purpose.

**Foreign policy.** It has a particular subordinate significance to policy aimed at an economic and social transformation of the country.

Figure 19.9

**Strategic Matrix of China, 2003–2080**

Peking has proclaimed the maturity of its foreign policy, its deideologized nature, moderation, orientation to dialogue and cooperation with all countries, first of all, neighboring. Really, China needs a peaceful neighborhood in a long-term prospect. Furthermore, the dependence of China on the outer world, first of all, on the West increases constantly. In such situation the policy of good-neighborliness for Peking is an imperative need.

The Chinese leadership constitutes a group of traditionally thinking figures in general for whom the state is the supreme value. In this context foreign policy of Peking is quite predictable. Also, it does not basically make a secret that a foreign strategy of the People's Republic of China is aimed at the time gain for accumulation of forces and finally transformation of China into world, and not only a regional power of the first rank. It may be called the desire to prevail, dominate or only to occupy a worthy place in the system of international relations – it is not that important.

The prime line of Chinese foreign policy will remain American due to a traditional practicality inherent to it pro-

Table 19.2

**Changes in Major Parameters of China  
by Indicators of the Strategic Matrix  
(8<sup>th</sup> c. B.C. — end of the 21<sup>st</sup> c.)**

Event	Date	Indicators of the Strategic Matrix								
		Adminis- tration	Territory	Natural resour- ces	Popula- tion	Economy	Culture and religion	Science and educa- tion	Army	Foreign policy
8 <sup>th</sup> c. B.C. — 6 <sup>th</sup> c.										
Rise of the Chou Empire	8 <sup>th</sup> c. B.C.	3	2	6	2	3	3	3	3	4
Period of Zhanguo «Warring States»	5 <sup>th</sup> –3 <sup>rd</sup> c. B.C.	2	1	2	1	2	2	2	3	3
Rise of the Han Empire	End of the 2 <sup>nd</sup> c.	4	3	6	3.5	4	3	3	4	5
Period of the Southern and Northern Dynasties	386–589	2	2	2	2	2	2.5	2.5	2	2
Middle Ages										
Establishment of the Tang Empire	618	5	5	8	4.5	4	4	4	4.5	6
Rise of the the Tang Empire	8 <sup>th</sup> –9 <sup>th</sup> cc.	6	6.5	9	6	6	5	7	5	4
Rule of the Yuan Mongolian Dynasty	13 <sup>th</sup> c.–14 <sup>th</sup> cc.	1	3	3	3	1	3	2	1	1
Formation of the Ming dynasty	1368	3	4	5	4	4	4	4	4	5
Rise of the Ming dynasty	16 <sup>th</sup> c.	6	7	9	7	6	5.5	7	5.5	5
Modern History										
Rule of the Qin Manchu dynasty	1644–1911	3	6	7	8	6.5	5	3	4	4
Abdication of the Qin dynasty	1912	2	5	6	9	2	5	1	1	1
Establishment of the People's Republic of China	1949	4.5	6.5	4	9	3.5	7	1	3	4
Nowadays	2003	8	7.5	7	10	7	8	7	7	7
Forecast										
Rigid globalization	2080	8	7.5	6	10	7.5	8	7	8.5	6
Moderate globalization	2080	7	7.5	6.5	10	8	8.5	7.5	8	7.5
Regionalization	2080	6	8	6	10	9	9	8.5	9	9

vided that the USA retains its leading positions in the world. Developing the relations with Washington Peking is likely to be seeking to restrict or reduce the influence of America, first of all in its near neighborhood. The concept of a multi-polar world that implies «counteraction to hegemonism» serves as a grounding of such actions. In such case, relations with Russia for Peking will play a subordinate role as a component of the line to the establishment of a favorable outer neighborhood and conditions for successful internal development. In the medium-term prospect – approximately throughout the next 20 years – Peking seems to pursue quite «economical» foreign policy practicing self-restriction and eluding conflicts. As early as near to the end of the 21<sup>st</sup> century this semi-isolationism seems to be replaced by an active policy aimed at a gradual formation of not only China friendly, but to a great extent pro-Chinese disposed Eastern and Central Asia.

The forecast of the development of China based on the strategic matrix for a period to 2080 under three scenarios (rigid globalization, moderate globalization and regionalization) is given in *table 19.2*. The third scenario is most favorable for China.

## 19.3. Strategic Matrix of Japan<sup>1</sup>

### 19.3.1. Ancient Japan (3<sup>rd</sup> – 7<sup>th</sup> c.)

**Population.** According to many researchers the first inhabitants appeared on the Japanese archipelago in the 3<sup>rd</sup> millennium B.C. who came here from the Southeastern Asia. These were the proto-Ainu tribes who formed the Neolithic culture of the Jomon. The Ainu remained the major population of the Japanese islands before the ancestors of contemporary Japanese appeared here. Apart from them the Kumaso (Hayato) tribe lived in the south of Kyushu. The proto-Japanese tribes (South Mongoloid type) migrated from the island through the Korea Peninsula in the 2<sup>nd</sup> millennium B.C. Their number increased fast, they conquered the Kumaso and waged a long war on the Ainu, which ended only by the end of the 12<sup>th</sup> c.

<sup>1</sup> This section is made by **A.I. Ageyev**, Doctor of Economy, Professor, Academician of the Russian Academy of Natural Sciences, and **B.V. Kuroyedov**, Candidate of Military Sciences

From the 2<sup>nd</sup> c. many Chinese and Koreans who escaped the internecine wars in their countries moved to China. The formation of the Japanese nationality continued until the 4<sup>th</sup> c. by mixing these tribes with the local Ainu population. A total number of population on the Japanese islands made 3 mln. people according to **A. Maddison's** estimate [264, p. 256].

The insular location and a lack of land boundaries determined a later formation of the state on the territory of Japan compared to a continental part of East Asia (China, Korea, and Viet Nam). By the beginning of our era the Japanese lived in communities that were built based on the principle of blood relation. The clan (Uji) was the major entity. The clan was headed by the chieftain (uji no kami). As the population grew and clans expanded their stratification and division into large (ouji) and small clans (kouji) occurred. Beginning from the 1<sup>st</sup> c. the clans began to unite into the clan and tribal unions, and in the 2<sup>nd</sup> c. the formation of intertribal unions began. Already in the 3<sup>rd</sup> c. a large tribal union known in the history of Japan as the Yamato state existed. The Japanese state sprang up further on its base. Concurrently, the Chinese and Koreans actively moved to the islands.

The first mention of the Japanese is found in the Chinese chronicles dated back to the 1<sup>st</sup> c. B.C. — 5<sup>th</sup> c. A.D. The Chinese chronicle Wei Chih (the History of Wei) contains rich notations about ancient Japan of the 3<sup>rd</sup> c.

**State Administration.** Yamato was headed by the largest and richest clan and its chieftain called himself the «king of the Yamato state». The clan was considered «royal» and further started a continuous dynasty of the Japanese Emperors. Gradually the power of the Yamato rulers, which was at first of a clan-tribal nature, assumed the form of monarchy. At that the clans kept their autonomy, and their chieftains — power over land and people of the clan.

Together with the development of the state relations the slave order emerged and developed. The slave numbers were replenished from both the clashes between clans and as a result of the conquering of the Ainu and Kumaso.

The development of society and state led to the centralization of power. Prince **Shotoku Taishi** (regent 593–621) carried out a number of reforms: instead of the hereditary system of offices he established 12 ranks of civil servants; introduced the «Seventeen Article

Constitution» which incorporated Buddhist and Confucian guidelines for state administration and proclaimed the supreme power of the Yamato kings; he ensured support to Buddhism, which began to spread in Japan from the 6<sup>th</sup> c.; he established diplomatic relations with the countries of continental Asia. And it was he who introduced the title *tenno* first (literal translation — «Son of Heaven», in the European understanding — «Emperor»); and this is the name the rulers of Japan call themselves to this day.

The formation of a rigidly centralized feudal state speeded up in the second half of the 6<sup>th</sup> c. when as a result of the coup they toppled the power of the Soga clan, which was connected with the nobility and the imperial clan proper positions strengthened. In the course of reforms the state-feudal ownership of land in the form of allotment system was established.

***Territorial development.*** Although the migration routes of the ancient Japanese ran both through the islands of the Philippine archipelago and the Ryukyu islands (the Okinawa islands), originally the territory of the Japanese state extended only to a part of the Honshu island — the area of Yamato (hence the name of the state). In the 3<sup>rd</sup>–4<sup>th</sup> cc. as a result of both a peaceful joining of other clans and tribes and military seizure the Yamato state extended its power to a greater part of the Honshu territory. Apart from it in 369 it conquered a small area (Mimana) in the extreme south of Korea (close to today's Pusan) and owned it until 562.

***Natural resources.*** A volcanic nature of the Japanese islands ensured relatively large reserves of mineral resources, which were able to ensure the demands of the state at that stage of development. Japan was fully all-sufficient by the level of the endowment with iron, copper, manganese and lead-zinc ores and also coal. Stable commodity relations with continental states promoted the development of gold and silver deposits.

Japan has also large water resources: these are not only seas, but many short, but full-flowing mountain rivers. This conduced to the development of fishery and irrigated cropping, and also the development of river transport.

The basis of ***economy*** of ancient Japan was agriculture. Mild climate and rich water resources determined the priority development of fishery and rice-growing (embraced from the continent). Other occupations of the populations included hunting and cattle breeding.

Rice and fish became not simply major foodstuffs: all other national production was built around them — farming tools, fishing tools, product processing etc. Rice growing conducted to the development of irrigation and construction of the relevant facilities. In terms of GDP output per capita Japan was somewhat behind the average world level by the beginning of our era (USD 400 in prices of 1990 to 445).

In the second half of the 7<sup>th</sup> c. the deposits of oil, antimony and tin were discovered in Japan; the development of metallurgy and paper making began.

**Culture and religion.** Religious beliefs of the ancient Japanese were of a mystically-mythological nature. According to them the world was inhabited by shades always interfering into people's lives. They worshiped the spirits of fields, rivers, mountains, valleys, fire, water etc. And they especially worshipped the Sun Goddess — Amaterasu who became a general tribal god of the imperial clan. According to the Japanese chronicles, first Emperor of Japan — **Jimmu** who acceded to the throne in 660 — was a lineal descendant of Amaterasu.

In that period oral song and poetic art and mythology were wide developed in Japan. As stable ties with the continents formed and developed, new religious trends, first of all Buddhism began to penetrate into the country. The beginning of its spread in Japan dates back to the 6<sup>th</sup> c. The Buddhist culture was first embraced by the sects of Tendai and Shingon on the islands. The founders of these sects — **Saicho** and **Kukai** — suggested their own interpretation of Buddhism. Its favoring on the part of the supreme power fostered the popularity of this new religion. Thus, from the middle of the 1<sup>st</sup> millennium A.D. Japan entered the Sino-Buddhist area of the cultural ties.

Along with Buddhism theatrical forms from the countries of East Asia appeared on the islands. These musical and dance performances (gigaku and bugaku) conducted to the formation of classic Japanese theater.

A large number of monks and ordinary peasants, and also craftsmen and even scientists moved to Japan from China and Korea. Finally, it led to the use of the Chinese hieroglyphical writing in official papers at the turn of the 4<sup>th</sup>–5<sup>th</sup> c.

**Science and education.** In the ancient times and early middle ages natural science knowledge was mainly accumulated in the

fields associated with agriculture, medicine and crafts. The cultures of China and Korea produced a significant impact on the development of such knowledge.

The emergence of philosophy in Japan is connected with the penetration of Buddhism into these countries and somewhat later (7<sup>th</sup>–8<sup>th</sup> c.) Confucianism. In the 6<sup>th</sup> c. the first schools emerged by the cloisters. In 675 the first observatory was built in Asuka. At the beginning of the 5<sup>th</sup> c. the royal astronomic department was established and the first legislative act on education was enacted – an attempt to establish the system of governmental schools (capital and provincial) was undertaken. The boys from the upper class studied Chinese classic literature, philosophy, law, history and mathematics there. These schools existed not long and were closed in the time when the feudal disunity intensified. Great feudalists established new clan schools at their courts instead of them, where the young men studied military art, literature, mathematics and etiquette. Education of peasants and craftsmen was reduced to a transfer of labor skills, and the upbringing was through the Buddhist prayers.

By the 6<sup>th</sup> c. *armed forces* of the Japanese state had features of both tribal and new feudal system. It was manifested in the maintenance of the professional array (like the princely array) by the Emperor, and also he had to «call up for military service» all adult male population in case of war. This army could not compete with the armies of the continental states by its level of combat capabilities and total number; however, it corresponded well to the level of development of the country and met missions assigned to it. This is corroborated by the fact that in the 1<sup>st</sup> c. the Japanese often made incursions on the Korean coast. Nevertheless, the major task of the army was expansions of Yamato's possessions on the Japanese islands that time.

The objective of *foreign policy* of that time was the establishment of amicable relations with continental neighbors. There is information that Prince **Shotoku Taishi** sent several embassies to the Emperor of the Chinese Sui dynasty, which resulted in the establishing of regular trade and cultural exchange.

The values of the indicators of the strategic matrix of Japan of that period is given in *fig. 19.10*.

### **19.3.2. Japan in the Middle Ages (7<sup>th</sup>— second half of the 19<sup>th</sup> c.)**

As a result of the «Taika Coup» in the second half of the 7<sup>th</sup> c. state-feudal ownership of land in the form of an allotment-based system was established in Japan. It occurred by depriving of individual clans of the right to own land and ended with the completion of the formation of a centralized feudal state. The country was divided into provinces (kuni) and counties (guns) headed by appointed governors (kokushi) and heads (gunji) as a rule former clan chieftains and representatives of local nobility. In 701 the whole system of feudal relations was fixed in the code of laws known under the Code of Taiho.

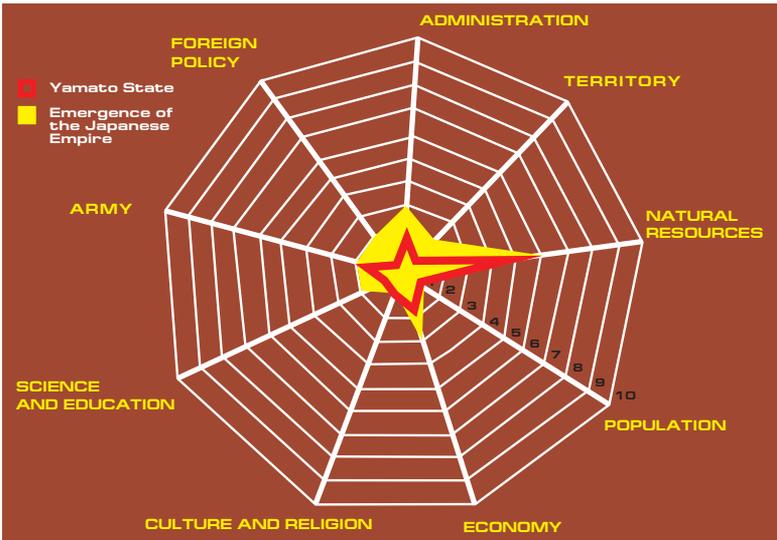
Before the beginning of the 8<sup>th</sup> c. there was no permanent capital, after the death of the Emperor it moved to a new place through religious reasons. Nara established in 710 became the first permanent capital. In 794 it was transferred to Kyoto (Heian) — the city built by the Fujiwara house who concentrated the central power in their hands at that time. Fujiwara ruled as chancellors (kampaku) and even more often as regents (sessho) under juvenile emperors whom they forced to become monks and retire to cloisters when they reached majority.

As a counter to the state property to land private dominions (shoen) began to emerge already from the end of the 8<sup>th</sup> c.; their owners were entitled to land and income therefrom. As a result by the beginning of the 10<sup>th</sup> c. the allotment-based system in its original form was actually destroyed, a warrior feudal class (bushi) formed in Japan and it fell into great feudalists — princes (Daimyo) and gentry (samurais). Strong feudal clans (houses) that had many vassals subordinated to it appeared.

In 1185 as a result of the victory over the Taira house the Minamoto house occupied the dominating position in the country. Its head — **Yarimoto Minamoto** — proclaimed himself the supreme commander-in-chief (shogun) and the head of the government (bakufu — general headquarters) concentrating all military and civil power in his hands. The shogun appointed military governors (shogu) who headed the provinces. The Emperor, who was in Kyoto with his court, was fully deprived of temporal power keeping only sacral. With short breaks this form of the government existed up to 1868.

Figure 19.10

## Strategic Matrix of Japan in the Ancient Centuries



In the first half of the 17<sup>th</sup> c. the Tokugawa dynasty ruling since 1603 succeeded in uniting Japan disunited between great feudalists into the centralized feudal-absolutist state. The system of rigid control was introduced over Daimyo by the government. The gentry, samurais, was concentrated mainly in the cities – residences of the princes getting wages in kind (rice). The system of four estates was established consisting of samurais, peasants, craftsmen and merchants with a strict regulation by estates. All other «common people» (heimin) opposed the samurais as the only privileged class.

By the second half of the 19<sup>th</sup> c. Japan appeared in the state of political and economic crisis. As a result of the events of 1862– 868, which got the name «Meiji Restoration» in the history of Japan, a representative of the last shogunate **Tokugawa** waived the powers and demised it to the Emperor. It is believed that these events opened a new capitalist era in the history of Japan.

From the beginning of the Middle Ages and to the end of the 12<sup>th</sup> c. in struggle against the Ainu the expansion of the *territory* of the state in the northeast of Honshu continued. As a result, the power of the Emperor (in actual fact – shoguns) was extended to the Shikoku, Kyushu and Okinawa Islands. Beside, the shoguns

undertook twice unsuccessful attempts in 1592–1593 and 1597–1598 to seize the lands on the Korea Peninsula.

As the Japanese state developed, it used its available *natural resources* to an increasing degree. However, despite considerable development of economy, the level of endowment with them remained enough to support local demands of the country and their export.

In the Middle Ages, the *population* growth rates in Japan considerably speeded up. Although many people died from natural calamities (tsunami, earthquakes) and wars, a relatively high level of sanitary and medicine for that time (compared to Europe) ensured a considerably higher (compared to same Europe) share of survival of children born and conducted to the population increase as well as a special attitude to children – a kind of the «cult of a child» began to form that time. As a result the residents of Japan made about 27 mln. people by 1700.

Agriculture continued to be the foundation of the Japanese *economy*, however from the beginning of the 16<sup>th</sup> c. crafts and trade began to play an increasing role in it. Manufacturing of cold-arms and porcelain got international recognition.

The volume of foreign trade significantly increased. Japan established trade relations not only with China and Korea by that time, but with Siam, Viet Nam, Cambodia, Java and other countries of the Southeastern Asia. The Japanese exported timber, gold, copper, cold-arms, lacquer items and fans from their country, and imported raw silk, cotton, linen, brocade, porcelain, drugs, artworks and books.

The development of foreign trade influenced a lot on the advance of the primary industry. The feudalists began to be actively engaged in mining (mining of gold, silver and copper) in their domains. A part of resources mined was used in local production, which told favorably on economy of the country; however these resources were mainly exported.

With the establishment of a regular trade with the European countries in 1543 – Portugal, and then Spain (1584) fire-arms became one of the major import items from them. Furthermore, the Europeans acted as mediators in the trade relations of Japan with other Asian countries.

For the land tenure management in Japan of the Tokugawa dynasty the existence of a large number of petty peasant households which performed homage in favor of the daimyo was typical. Along with that a section of the so-called new landed classes appeared in

the village formed from the merchants, usurers, well-off peasants, and also samurais. The manufactories were set up, including cotton and silk-weaving manufactures. The industrial production emerged at the end of the 18<sup>th</sup> – beginning of the 19<sup>th</sup> c. The capitalist system of economy gradually formed. At the end of the 15<sup>th</sup> – beginning of the 18<sup>th</sup> c. Japan of the Tokugawa period reached its peak in the development.

At the beginning of the second half of the 18<sup>th</sup> c. machine hydraulic line was invented in Japan., and in 1780 – a spinning frame with a hydraulic drive that promoted an extensive development of a manufactory (making of silk and cotton fabrics, paper and porcelain). However, later Japan entered a long period of economic and political crisis. While from 1000 to 1700 its share in the world GDP increased from 2.7 % to 4.1%, then by 1870 it dropped to 2.3% [264, p. 260]. In 1820, GDP output per capita was equal to world average, and in 1870 it turned out 16% lower [ibid., p. 262].

**Culture and religion.** With a move of a permanent capital at the end of the 8<sup>th</sup> c. to Kyoto (Heian) the efflorescence of arts began in Japan (the Heian period until the end of the 12<sup>th</sup> c.). At the beginning of the 8<sup>th</sup> c. the first Japanese historical chronicles appeared. The most significant of them were created by **Oo-no Yasumaro** in 712 – «Kojiki» («Record of Ancient Matters») and by prince **Shinno** in 720 – «Nihon Shoki» («The Chronicles of Japan»). Both chronicles include most complete records on the ancient history of Japan beginning from the «era of Gods» and contain various myths, legends and stories along with historically true information, especially in the period of the 5<sup>th</sup>–7<sup>th</sup> c. In 759 the first Japanese poetical anthology «Manyoshi» appeared comprising more than four thousand and a half folk and author (about 500 authors) poems, mostly in the tanka genre.

By the end of the 9<sup>th</sup> c. the period of the Fujiwara house reign after three centuries of close trade, diplomatic and cultural relations, official ties with China were discontinued and the Japanese state assumed an individual image. The nascence of the Japanese narrative literature attributed to that period (most known work «Taketori Monogatari» comprising a number of short stories incorporated in the general framing plot). Folk and literature plots are used in this story, the characters dowered with miraculous and real everyday features.

In the 10<sup>th</sup>–11<sup>th</sup> c. such esthetic category as mono-no aware («sadness charm of things») formed under a joint impact of cultic

traditions of Shintoism and teachings of certain sects of Buddhism and it set a stamp on further development of culture and literature in Japan. First literature works appeared. «*Rekishimonogatari*» (historical tales), *katami* (memento or keepsake, i.e. works reflecting the reality) and *miraiki* (chronicle of the future) became widespread. A special type of fiction saturated with poems, whose first example is «*Ise-monogatari*», and then diaries and memoirs (*nikki*) originated from a combination of an extempore poem and prosaic introduction thereto.

For a period of the 12<sup>th</sup>–16<sup>th</sup> c. the emergence of military-feudal epics *gunki* – war tales, the heyday of dramaturgy and *renga* poetry («*successive linked verses*») and the nascence of the city literature (16<sup>th</sup> c.) are typical. In poetry along with *tanka* the *imayo* genre spread («*modern style*»).

In the 17<sup>th</sup> c. the *haiku* genre occupied the prevailing position in the Japanese poetry and established several official schools. This gave rise to popularization of poetry, introduction of vernacular and dialectal lexes, democratization of topics.

By the end of the 14<sup>th</sup> – beginning of the 15<sup>th</sup> c. the No Theater comprising music, dance and drama action originated from various borrowed and originally Japanese performances. The historical roots of the theatre go back to the ancient ritual actions of agricultural festivities. In the 14<sup>th</sup>–15<sup>th</sup> cc. the esthetic basis of the No art was devised as a refined theater of warriors and aristocracy. In the 17<sup>th</sup> c. other genres reflecting the demands of the third estate also developed – theater of puppets *yoruri* and *kabuki* theater, which became leading traditional genres of the Japanese theater art. *Joruri* includes a musical and song story performed by a singer story telling and a puppet show. The *kabuki* theater (actors perform) combines musical, dance and drama elements. It developed in parallel with the *yoruri* theater and they both influenced each other. The *kabuki* theater was finally formed by the end of the 18<sup>th</sup> c.

The Middle Ages also became a period of the formation and heyday of many kinds of arts that determined an inimitable face of Japan and its contribution to the world culture. A national style of architecture, original watercolor painting, landscape architecture (Japan is considered its founder in the world) emerged under the Zen philosophy being formed at that time. The culture of tea consumption introduced from China became an independent type of national art. Tea ceremonies encouraged further development of ceramics and porcelain making.

Along with the first Europeans Christian preachers came to Japan, who launched active missions. However, the result of such activity was minor even with the elapse of several centuries. By the beginning of a new period religious views of many Japanese still represented a combination of traditional Shintoism with the elements of Buddhism and Confucianism.

All this indicates that in the 9<sup>th</sup>–10<sup>th</sup> c. Japan was not simply self-contained, but one of the leading countries of the world in culture and religion. However, its influence on other countries was checked by the state policy of self-isolation pursued at that period.

**Science and education.** In the 8<sup>th</sup> c. the Japanese abacus – tikusaku was created. Circa 1840 book printing (wood block printing) got to Japan. At the beginning of the 10<sup>th</sup> c. **S. Fukaz** made a review of animal and plant kingdom of Japan, which comprised eighteen books. In the 12<sup>th</sup>–14<sup>th</sup> c. the teaching of Zen, Jodo and Nitiren formed, outstanding interpreters of Buddhist philosophy worked as **Dogen**, **Shinran** and **Nitiren**. By the middle of the 14<sup>th</sup> c. a geographical description of the provinces was made, **S. Kajiwara** compiled «The Notes about Medicine» (1350).

In the 14<sup>th</sup>–16<sup>th</sup> c. Buddhism dominated unlimitedly in the philosophical thought, since the 17<sup>th</sup> c. Confucianism assumed preponderant influence, which was more in line with the feudal foundations of the Japanese society. A neo-Confucian school of Shushigaku was the leading philosophical trend. Along with the school of classic Confucianism of Kokugaku and the school of Yomeigaku followers of Chinese philosopher **Wang Yangming** existed.

In the 16<sup>th</sup>c. information penetrated into Japan about the European natural science, however, from 1639 and to the middle of the 19<sup>th</sup> c. the country was completely closed for foreigners. In that period the achievements of world science became known in Japan mainly through special union of translators rangaku, who compiled reviews on various branches of knowledge.

In the 17<sup>th</sup> – beginning of the 18<sup>th</sup> c. the formation of original national scientific schools began. In mathematics algebra («ten-jian») and theory of circles («enri») were formulated, and substantiation of the theory of infinite decimals was given (1726). In 1744 the astronomical observatory was established in Edo. At the end of the 16<sup>th</sup> c. a star globe was built and jokyo calendar compiled, an idea of the dependence of changes in weather on solar activity was set forth.

At the beginning of the 19<sup>th</sup> a geodetic survey of the territory of the country was performed and some areas of the sea coasts of the Far East were plotted on the map (1809). About this time there were written the first Japanese «Treatise on General Physics» (**Rinso Aoti**, 1825) and the work on chemistry (**Yoan Udagawa**). In 1833 **H. Yoshida** separated the first biocatalyst preparations. The first attempt to dissect man was undertaken in Japan then.

In the middle of the 17<sup>th</sup> c. a vigorous growth of cities, development of trade and crafts underlie the establishment of schools for children of craftsmen and poor samurais where the teenagers were taught literacy, counting, and manual labor.

The samurai estate made the basis of not only the command staff, but all Japanese army. The peasants were drafted into the army only on special occasions. In actual fact, the army consisted of the Samurai horsemen and infantry. The navy was inconsiderable in terms of its numerical strength and by level of combat capabilities due to a lack of square rigging and artillery armament.

Nevertheless, the level of military efficiency of ground forces was high enough. In 1274, the period of the Mongolian inroads who had seized China and established their dynasty their, the Japanese inflicted several sensible defeats on them and as a result the invaders had to evacuate. The second attempt of incursion in 1281 also failed: most vessels of the Mongolian army were lost in a typhoon.

Knowing the fire-arms as a result of contacts with the Europeans brought about an overturn in the Japanese military art. A new arm of infantry comprising peasants armed with guns (*ashigaru*) was established. This novelty fostered the changes in society: some infantry soldiers-peasants who distinguished themselves by military service got the samurai ranks, and sometimes high government offices.

Despite it, conservatism of the Japanese government in the views on military construction became the reason for a lagging behind more and more of the Japanese army and navy from the leading world powers since the 16<sup>th</sup> c. As a result a weight of Japan considerably fell in the world, economic and political crisis ended with a bourgeois revolution, which hit the country in 1868.

A specific feature of the Japanese *foreign policy* of that period is its self-isolation. At the end of the 9<sup>th</sup> c. official ties with China were suspended. However, objective demands of economy and natural pace of the history led to a gradual lifting of the ban. The coun-

try had already maintained contacts with many countries of Asia – China, Korea, Siam and India – by the time Japan was discovered by the Europeans.

After several decades of contacts with the European countries the government of **Tokugawa**, fearing expansion on their part, and also spread of Christianity, returned to policy of isolationism. In 1633, 1636 and 1639 the decree on «closing the country» followed (under pain of death the entry of foreigners to the country, travelling of the Japanese abroad and construction of large vessels was prohibited). From 1641 the restricted trade with China and Holland was authorized only in Nagasaki (Desima).

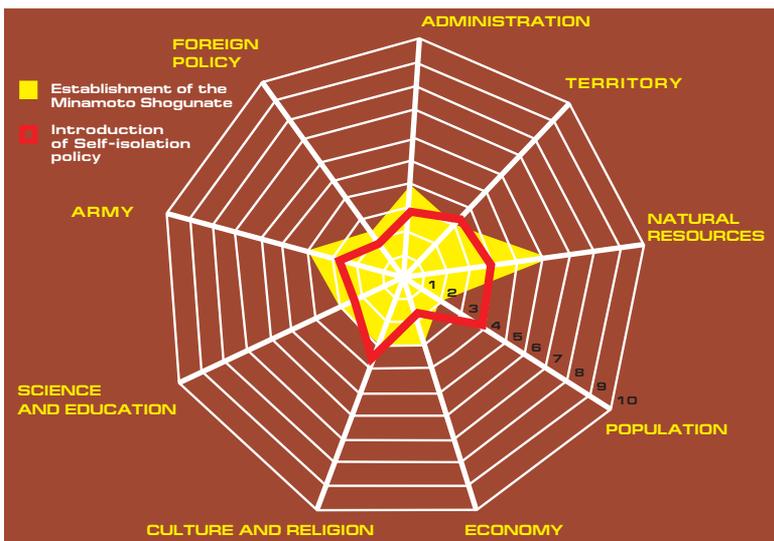
In the 50s–60s of the 19<sup>th</sup> c. the government of Japan under pressure of the USA and European states had to refuse from self-isolation. By sending a military squadron in 1854 the USA achieved that the Shimoda and Hakodate ports were opened for foreign vessels. The agreement signed by Japan with the USA and European powers in 1854–1858 (Ansei Pacts) introduced it to the world market. The first Russo-Japanese Treaty giving rise to official relations between two countries was signed the same year 1855.

The policy of forced concessions to foreigners continued until the beginning of the 60s when in 1863 under pressure of the samurais the Emperor issued a decree on exclusion of foreigners from the country. Finally, this led to the so-called uncompleted bourgeois revolution of 1868. A matrix of Japan of the Middle Ages is given in [fig. 19.11](#).

### **19.3.3. Modern History of Japan (1868–1945)**

The «restoration of Meiji» was a kind of a bourgeois revolution as a matter of fact. Its specifics were in its major driving force – feudalists who established a new government. The Japanese bourgeoisie, mainly trade and usurious at that time, was still politically weak and could not come directly to power. Nevertheless, the daimyo, who entered the government, were considerably bourgeoisified and were closely connected with bourgeoisie, expressed its interests. This duality of the government determined a general capitalist direction of development of Japan under survival of many feudal remnants. And therefore the revolution of 1868 is called «uncompleted».

Figure 19.11

**Strategic Matrix of Japan in the Middle Ages**

During several years a number of significant reforms in the system of *state administration* were implemented in the country. In 1869 the daimyo were deprived of feudal rights and appointed hereditary governors. However, already in two years, in 1871 the principalities were liquidated. The prefectures (kens) were established instead of them, and the hereditary governors were replaced by the prefects appointed by the government. The same year unified laws and judicial system were established countrywide, and all strata were made equal, all regulation of jobs and occupations was abolished, shops and guilds were liquidated.

A rapid capitalist development of Japan aggravated social contradictions, intensified internal political struggle, and brought it to a new level. In 1881–1882 the first political parties appeared in the country — liberal party (Jiyuto) and party of reforms (Kaishinto).

In 1889 the government on behalf of the Emperor published the Constitution compiled on the model of Prussian. Japan was proclaimed a constitutional monarchy headed by the Emperor whose person is «sacrosanct». The legislative power was vested in the Emperor and the bicameral parliament consisting of the House of Lords and the House of Representatives. The lords

were appointed by the Emperor from among representatives of the aristocracy, and also people with outstanding services to the monarchy. The House of Representatives was elected for four years and could be dissolved by the Emperor. Electoral rights were restricted by many qualifications — property, local residence requirement, age etc. — so that only 2% of the population was the electors.

The Cabinet accounted for its actions only to the Emperor. Apart from him, the Privy Council — a deliberative body by the Emperor, which was appointed by him and consisted of the President, Vice-President and 25 members, who played a large role in the determination of governmental policy.

Formally being a constitutional monarchy in actual fact Japan was an absolute monarchy. With some changes (the Universal Suffrage for Men Act of 1925, which abolished property qualification; the emergence of new parties etc.) this system of state administration existed to the end of World War II. And it was quite in line with the world practice of that time (Great Britain, Germany) and ensured efficient administration of the state.

**Economy.** In 1873 the agrarian reform that abolished feudal ownership of land and granted it to private ownership of peasants (those plots that they had farmed by the enactment of the law) and the so-called new agricultural landlords (rich peasants, merchants, and usurers), whose land was pledged and could not be bought out by the owners, was implemented. The peasants who got the land had to pay a land tax making 3% of its value.

Trying to catch up with developed countries, the government began to build industrial enterprises (textile, mining, metallurgical etc.), railroads, sea-crafts, telegraph lines granting generous subsidies, loans, and tax benefits to private businessmen. In 1872 the first railroad line Tokyo-Yokohama was opened.

At the end of 1880 on the ground of necessity for the improvement of cost-effectiveness of the industry the law was enacted transferring many enterprises to private capital on the terms exclusively advantageous for them. In Japan, such large monopolistic unions emerged as the Japanese Paper Company (1885), Japanese Textile Company (1882), Japanese Shipping Company (1885) etc. Enterprises of military industry remained mainly in the hands of the state.

The Japanese-Chinese war of 1894–1895 speeded up the transformation of Japan into the imperialistic power. Strongly lagging

behind by the level of economic development from the leading world power, nevertheless it entered the stage of monopolistic development at the turn of the 19<sup>th</sup>–20<sup>th</sup> cc.

The victory in the Russo-Japanese war was at the cost of hard pressure on economy. However, obtaining considerable economic preferences from Russia, including large monetary indemnity, and also a direct assistance from the UK and the USA helped to restore its economy fast.

Entering World War I on the Entente side Japan did not participate in military operations as a matter of fact. However, it managed to use a favorable situation and seized far eastern and other Asian markets, which had been owned by the European countries, for sale of its commodities. Japan became a monopolistic supplier and generated large profits. As a result by the end of the war the scope of its industrial production nearly doubled, new industries emerged – aviation, engine engineering etc.

However, soon after the end of the war economic situation of Japan worsened. It lost fast its advantageous positions occupied in the wartime as the European countries began again to import commodities to the Asian countries, thus ousting Japanese because of quality. The world economic crisis of 1920–1921 aggravated the situation. Some stabilization was managed to be achieved only since 1924.

The world crisis of 1929–1933 hit the Japanese economy even more. The higher echelon of Japan tried to find the way-out in militarization of economy and country in general, in outside aggression. In 1937, economy was put on a war footing ensuring ever-increasing demands of the army in weapons and arming. The industry was able to manufacture all kinds of weapons existing at that time (including such unique as submarines and aircraft carriers).

Japan remained one of the strongest world powers of that time until its defeat in 1945.

The **population** numbers of Japan made 40 mln. people by the beginning of the 20<sup>th</sup> c. and the country was ranked among most densely populated countries of the world by this indicator; already 125 mln. people resided there by the end of the century. However, the population increase rates that exceeded by 42% world average turned out to be 2.9 times lower than that by the end of the century (1973–2001) [ibid, p. 256–257].

**Territory.** Seeking to divert the samurais from internal political struggle and problems pertaining to the state reformation the

Japanese government entered the path of external aggression promising them to allocate lands for personal use from seized territories for participation in external seizures. In 1874 Japan attempted to conquer Taiwan; however the leading world powers opposed it. Then in 1876 it send a military expedition to Korea. The same year the Kanghai Treaty was signed with Korea that was one sided for Korea and under which Japan got extraterritoriality and consular jurisdiction for its subjects in Korea and got the opportunity to drive trade with Japan through the Pusan port. Then two more ports were opened – Wonsan (Genzan) and Inchhon (Chemulpo) where the Japanese settlements sprang up.

In 1875, Japan executed the treaty with Russia; and the latter ceded the islands of the Kuriles Range in exchange of recognition of Sakhalin as completely owned by Russia.

In response of the revolt having broken out in Korea in 1894 Japan garrisoned troops there, who unseated the local government consisting of the supporters of China and replaced it by pro-Japanese and engineered a war on China thereafter.

The Japanese-Chinese war of 1894–1895 ended with the victory of Japan. Under the Shimonoseki treaty China ceded the Liaodong peninsula, Taiwan and the Pescadores islands to Japan, and also undertook to pay a large indemnity. However, at the suit of Russia, Germany and France Japan redelivered the Liaodong peninsula to China under the Peking Treaty and got an additional indemnity for it.

Under the Portsmouth peace treaty of 1905 executed by the results of the Russo-Japan war Japan got exclusive rights in Korea in addition to monetary indemnity and the territory leased by Russia on the Liaodong peninsula, South Manchurian Railroad and South Sakhalin.

In 1910 Japan annexed Korea turning it into its colony.

Entering World War I in August 1914 Japan focused its efforts on expansion in China. In 1915 it seized the Shandong province. At the Versailles peaceful conference of 1919 Japan succeeded in delivery of this territory, and also a mandate to manage the Caroline, Marshall and Marianas islands owned by Germany before.

Acting as one of the originators of the military intervention in the Soviet Russia after the October Socialist Revolution of 1917, Japan occupied coastlands, East Siberia and North Sakhalin and left them only after a tough struggle in 1922 (except North

Sakhalin, which the Japanese troops left in 1925 after the establishment of Soviet-Japanese diplomatic relations).

In 1931 the Japanese troops seized the Northeast of Mongolia by establishing allegedly «independent» state Manchukuo, which was a colony of Japan as a matter of fact. Then they seized a considerable part of Inner Mongolia intending to separate its northern provinces from China, including Peking under color of their «autonomy». After it entered World War II as an ally to Hitler Germany, in 1940 Japan garrisoned its troops to the north of Indochina, which was a French colony at that time. By 1942 when a breakdown occurred in the war in the Pacific Ocean, the Japanese seized the countries of Southeastern Asia (Malaysia, Singapore, Burma, the Philippines, Indonesia, and Hong Kong), a part of New Guinea, many islands in the Pacific Ocean formerly owned by the USA and the UK, and came to the borders of India and already threatened Australia.

After stunning defeats from the USA in May 1942 in the Coral Sea and in June of the same year near the Midway Islands, the Japanese began to lose conquered countries one by one. The Soviet troops launched combat operations against the Kwantung army in Manchuria in summer 1945. The Kwantung army was very strong and, even after the Emperor declared an unconditional surrender of Japan on August 14, 1945 Japan, did not cease to resist. As a result of fierce battles the Soviet troops liberated Northeastern China, North Korea, South Sakhalin and the Kuriles Islands by September 1945.

Thus, from the beginning of the 20<sup>th</sup> c. and to the defeat in 1945 Japan always sought to expand its territory by military expansion and not once was the originator of unleashing a war. As a result of such policy it became one of the largest colonial powers of the world in 1942, however, it lost all it gained already in 1945, including the territories got at the end of the 19<sup>th</sup>–20<sup>th</sup> c.

**Science and education.** With the transformations of the Meiji period the formation of modern Japanese science is connected. Concurrently with changes in the system of state administration in the 70s the Japanese government carried out significant reforms in education in the 19<sup>th</sup> c. General primary education on the European model was introduced, secondary schools and universities were established: state – Hokkaido in Sapporo (1876), Tokyo (1877) etc., and also private – Rikkyo (1874), Gakushuin (1877) in Tokyo, Doshisha in Kyoto (1875),

Kansai in Osaka. European scientists were invited to read lectures at the Japanese universities; Japanese translations of foreign scientific works were published. Many Japanese traveled abroad to study.

The Japanese government pursued the policy toward encouragement of scientific activity, especially of those directions that were in line with the interests of the army and military industry. At the end of the 19<sup>th</sup> c. the central meteorological observatory, military-topographic department, hydrographic and geological departments, and electrotechnical laboratory, Tokyo industrial laboratory — all in all more than 70 research institutions, and also about 70 research societies and associations were established.

The results of the government support to science told in the first half of the 20<sup>th</sup> c. In the 30s space ray researches began in Japan, isotope 238 was discovered, attempts to build cyclotron were undertaken, and outstanding works in chemistry, biochemistry and medicine were originated.

Military construction became one of the priorities in the development of Japan in the period under review. Education, science and economy worked to a great extent for satisfaction of fast growing army demands. As a result by the beginning of the 20<sup>th</sup> c. Japan had one of the most numerous and mission capable armed forces in the world.

All this found further confirmation during the Russo-Japanese war of 1904–1905. Despite the courage of the Russian soldiers and at great cost of life (even as compared to the Russian army) of the Japanese, Russia was defeated.

The need to maintain a formidable army allocating considerable funds therefor became the reason for overpressure on economy and reducing its opportunities to meet the needs of the armed forces. The defeat of the Japanese troops from the Red Army in the battles of Halhin Gol and Hasan Lake was the first evidence of that. The events of World War II proved the same.

Almost a major specific feature of the Japanese *foreign policy* of the end of the 19<sup>th</sup>—middle of the 20<sup>th</sup> c. may be called expansionism. A military-feudal regime viewed the army as a major tool to implement national interests and first of all expansion of the territory of the country and its colonies. However, it should be noted a flexibility of foreign policy of Japan: already by 1895 it succeeded to achieve the cancellation of one-sided treaties imposed on it in the 50s of the 19<sup>th</sup> c. from many

European powers and the USA and participate on equal terms in the division of China into the spheres of influence.

Even with its recent rival Russia Japan established normal relations resting on common interests of the countries in the use of resources of Northeastern China (Manchuria) and executed relevant treaties (in 1907 and 1910). The Soviet-Japanese Treaty of 1925 became a considerable success of the Japanese diplomacy. Apart from the establishment of relations, it determined the provision of oil and coal concession on Sakhalin by the Soviet Union to Japan, and based on it in 1928 Japan got concession for 8 year to fish in the Soviet waters.

In view of the foregoing a conclusion may be made that foreign policy of Japan in the period under review was a natural product of that time and was quite in line with the position of the great power held by Japan at that time. (*fig. 19.12*).

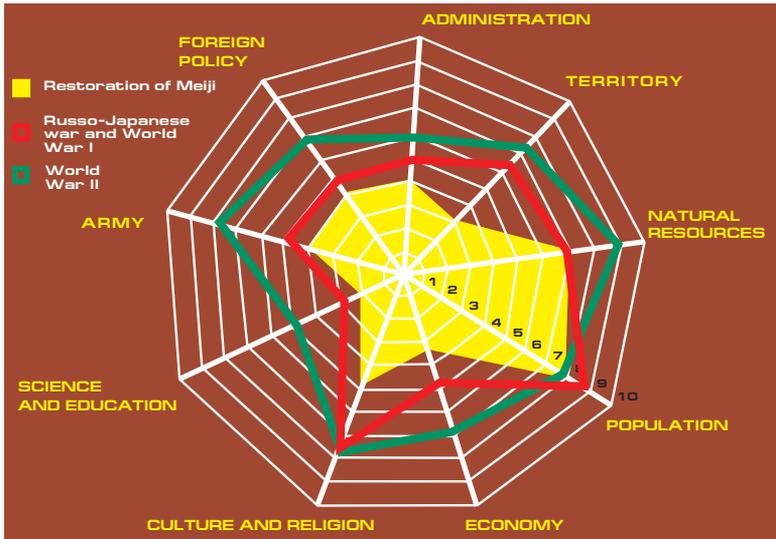
#### **19.3.4. Contemporary History of Japan (1945–2004)**

The defeat in World War II became a crash for Japan. Its territory was occupied by the US army, it was deprived of the right to have independent diplomatic, trade etc. relations with foreign countries, its army and navy were demobilized, military institutions and organizations were liquidated. Although formally national government persisted, in actual fact the commander-in-chief of the US occupation army General **J. McArthur** administered the country.

At the meeting of the Ministers of Foreign affairs the USSR, the USA and Great Britain decided to establish the Far Eastern Commission of representatives of the states warring on Japan for determining a political line of allies with respect to Japan after capitulation and the Allied Council from representatives of the USA, the USSR, Great Britain and China for consultations and advice on the issues of capitulation.

Under the resolutions of the Potsdam declaration on democratization and demilitarization of Japan, and also demands of the Far Eastern Commission and the Allied Council all military organizations were liquidated in Japan. The major war criminals of the country were committed to court of the International Military Tribunal and under its verdict died on the gibbet. A directive was issued on

Figure 19.12

**Strategic Matrix of Japan in Modern Period**

purging of all governmental and public organizations of Japan from fascist and military-oriented elements. Political prisoners were liberated and the freedom of speech, press, assembly and organizations was declared. Universal suffrage was introduced, men and women became equal in rights; the workers got the right to establish trade unions, to enter into bargains with employers and strikes. Political parties — liberal (jiyuto), progressive (shimpoto), socialist (shakaito) etc. were established anew.

**State administration.** Its modern forms in Japan are determined by the constitution adopted in 1947 in an atmosphere of a strong democratic rise.

The constitution of 1947 fixed a constitutional monarchy as a new form of the state system and a number of democratic gains. The people were proclaimed as a holder of sovereign power instead of emperor so any amendments to the constitution may be made only upon approval by two thirds of the all representatives of the parliament with a further approval of its resolution by all-people's referendum. The constitution proclaimed the equality of all nationals before law and abolished further aristocratic stratum with all its privileges; fixed the separation of Church and state, equality of legal rights of spouses in the family, the right to work, education and <life

with a minimum standard of health and culture», banned the exploitation of child labor. The universal suffrage and democratic freedoms were approved. Administratively the country was divided into 46 prefectures and Hokkaido circuit.

A precedent in the world practice is Article 9 of the Constitution declaring an unconditional refusal of Japan from war as a mean for settlement of international disputes and prohibiting the establishment of any national armed forces whether land forces, navy or air forces.

The Emperor of Japan being the «symbol of the state and the unity of the people» does not have real power. However, he continues playing a significant role in political life of the country. The functions of the Emperor include the appointment of the prime-minister as designated by the parliament, and also the chief justice of the Supreme Court as designated by the Cabinet; convocation of the parliament.

The parliament is the supreme state authority and the only legislative authority of the state. It consists of two houses — the House of Representatives (lower) and the House of Councilors (upper).

Power and rules of procedure of the Cabinet — supreme executive authority in Japan — is determined by the constitution and the Cabinet Act. It is vested with state administration and implementation of existing laws, pursuance of foreign policy, arrangement of civil service in compliance with effective laws, making up a budget for discussion and its approval by the parliament, and also issuance of governmental decrees.

Japan is one of few densely populated states in the world with a mono-national **population** — ethnic Japanese make 99% of the residents of the country. By population size (about 127 mln. people as of the end of 2003) Japan occupies the tenth place in the world. Furthermore, about 2.5 mln. Japanese reside outside the country: in the USA (about 1 mln.), Brasilia (about 800 thous.) and other countries of the world. By the end of the 20<sup>th</sup> c. a considerable fall in the population increase rates (0.25% in 1995–2000 against 1.43% in 1950–1955) and aging of population (a share of people at the age of 60 and above tripled for the second half of the 20<sup>th</sup> c.) have become grand problems.

In the first years of occupation of Japan its **economy** suffered strongly. The USA was not willing to promote the development of economy of its former enemy and competitor on the world markets, and national monopolies sabotaged the restoration of economy by refusing to spend funds for consolidation of the democratic system.

The overturn in such policy occurred in 1948–1949 when under the influence of the cold war and victory of the revolution in China the US government decided to turn Japan into its major military place of arms and «bulwark against Communist danger» in the Far East.

In 1948, the USA came to the conclusion that «economic stabilization» was necessary in Japan. In 1949, the US mission in Tokyo elaborated a specific program for the implementation of this concept. From 1950, the Japanese industry began to get the US defense orders aplenty and already in 1951 it reached the pre-military level. Preferences obtained by Japan in trade-economic relations with the USA as the largest subject of the world economy became the base of the «economic miracle of Japan». Other factors having conducted to high economic growth rates included: the availability of highly skilled manpower; the fundamental reconstruction of the industry and other sectors of economy assisted by the USA; a high level of gross internal investments in the government spending (their share made 30–35% in GDP); reducing expense for social needs. Until 1973 a low level of world prices for import raw material and fuel and energy resources told. The operation of these and a number of other factors was intensified by an increasing significance of the state in regulation of economy. As a result by the end of the 60s Japan held the second place in the world (after the USA) by GDP output and industrial production and became one of active participants in competitive struggle for sale markets and sources of raw materials. Average annual GDP growth rates made 10% form 1951–1973.

By the beginning of 2004 12% of the world industrial production fell to Japan. It occupies the first place in the world by motor and machine-tools, industrial robots, vessel, consumer electronics and electronic components manufacturing.

Japan is the third after the USA and Germany trade power in the world: in 2003 the scope of its foreign trade made 98.87 trln. yens (about USD 0.94 trln.), including exports — 54.55 trln. Japan has the largest positive balance in the balance of trade in the world.

Its major trade partners include the countries of Asia (first of all China, Hong Kong and Taiwan), the USA and Eurounion. The Soviet-Japanese relations were restored in 1956 after signing of the Joint Declaration that proclaimed termination of the state of war and restoration of diplomatic relations by both countries. There were signed the trade peace (1957), a number of treaties in fishery,

consular convention (1966), regular shipping (1958) and air (1966) communication was reestablished. After the disintegration of the USSR and protracted crisis of the Russian economy the scale of cooperation of the country decreased considerably. Although in 2003 a share of Russia in the Japanese turnover somewhat increased, nevertheless, it does not reach even 1% and much less a share of Russia's import (non-ferrous metals, seafood, carbon raw material, timber etc.).

Japan occupies the first place in the world by sizes of gold and currency reserves (USD 741.24 bln. as of January 2004).

Now own sources of *natural resources* of the country are nearly exhausted, therefore the industry of Japan is mainly operated on import raw materials. The country imports 100% of consumable natural gas, a greater part of consumable oil, ferrous and non-ferrous metals. The level of self-endowment with foodstuff is also one of lowest among industrially developed countries. However, Japan ensures in full its demands in the seafood (the largest world producer), rice, vegetables and fruit, and also supplies these kinds of goods for export.

*Foreign policy* of Japan is based on the maintenance and development of a military-political union with the USA on more advantageous terms for it. The Security Treaty signed in 1951 (from 1960 – Treaty on Cooperation and Security), was renewed not once, despite the protests of the general public requiring Japan to proclaim the policy of neutrality. Each extension of the treaty restates the US right to maintain military bases on the Japanese territory and the grouping of the armed forces. Japan also undertook a number of obligations to build up its military potential.

On October 19, 1956 the joint declaration between the USSR and Japan was signed. The Soviet Union waived all reparations demands to Japan and agreed to support its request on the admission to membership of the UNO. Both parties agreed to continue negotiations on entering into a peace treaty. The claims of the Japanese pertaining to the Iturup, Kunashir, Habomai and Shikotan of the South Kuriles Range impede further development of good neighborly relations between the countries (including the opportunities to sign a peace treaty).

The admission of Japan to the UN in 1956 allowed it to considerably intensify diplomatic activities. In 1972 diplomatic relations were established between Japan and China. In 1974–1975 the countries signed the treaty of trade-aviation communication, shipping

and fishery. Economic and scientific-technological ties of two states considerably expanded. Concurrently deep contradictions between them manifested themselves. Japan is wary of China's building up its economic and military potential. Both countries contest their sovereignty with respect to the Senkaku islands located between the Ryukyu and Taiwan archipelagos and the right to a continental shelf adjacent to these islands. Furthermore, having terminated officially diplomatic relations with Taiwan, nevertheless, Japan continues to maintain close economic ties with it.

A modern foreign policy of Japan is mainly oriented at cooperation with the USA and at the same time its objective is to raise the significance of the country in international affairs in accordance with its status of a powerful economic power. A special focus is placed on the intensification of the actions of Japan in the UNO with a view to become a member of the UN Security Council on a standing basis, and also other international institutions, including G8. Japan seeks to participate in the settlement of regional conflicts, in solution of the global development matters.

The major tendency in the development of *culture* in Japan in the second half of the 20<sup>th</sup> c. was an active embracing of modern world culture, first of all European and American. In its turn, the maximum openness of society has promoted a wide recognition of the Japanese culture in the world.

In the 50s a new stage in the development of Japanese literature began with its typical complicated interaction of several trends: traditional, democratic and Sangoha («post-war group»). In the 60s–70s the genre of science fiction and detective novels with elements of social criticism developed widely. A noticeable phenomenon is a Japanese cinematography in modern art, first of all cartoons and science fiction films.

In actual fact classic Japanese dramaturgy – the No theater, kabuki and joruri – persists in the canonical form of the end of the 14<sup>th</sup>–15<sup>th</sup> c. Performances of kabuki intended for general public are distinguished by their magnificent spectacle. Males (onnagata) traditionally play lady's roles in this theater.

Buddhism in the form of Mahayana represented by many sects is the most widespread religion in today's Japan. Its confession is combined with the adherence to Shintoism. Syncretic so-called new religions established on the same basis are less spread; the positions of Christianity are even weaker. And a half of today's population are disbelievers.

In post-war Japan *the system of education* was significantly restructured. In 1947 the Fundamental Law of Education that proclaimed the principles of equal access to education, was adopted; 9-year general free and compulsory education; joint education of boys and girls. A twin structure of public and private schools was established. The Ministry of Education and local committees (prefectoral and municipal) administer the system of national education. The institution of school inspectors (prefectoral and ministerial) directly controls the performance of schools.

The first level of compulsory education is elementary schools for children from 6–12 years old. The second level is junior secondary school for children from 13–15. The curriculum includes mandatory and optional subjects. A senior secondary school for children from 16–18 years old embraces about 90% graduates of compulsory school.

The state system of vocational-engineering training is low developed. Skilled workers are trained in the training center at enterprises, short-term courses and private vocational-training schools.

Higher education may be received in one of hundreds of universities, junior colleges or engineering colleges. Training period makes four years, medical faculties — six years. Two thirds of universities are private. The junior colleges train professionals with secondary engineering or secondary pedagogic education. 85% of junior colleges are private educational establishments, 86% of all students are girls. Apart from them there are engineering colleges with a five-year training period on the basis of a junior secondary school. These are mainly governmental establishments.

*Scientific activity* in Japan after 1945 was also considerably reorganized. For coordination of research works and pursuance of national scientific-technological policy the Science Council of Japan was established in 1949, and in 1956 — the Science and Technology Agency (with the powers of the ministry). In 1959 the Science and Technology Council under the auspices of the Prime-Minister of the country was established. The developed network of governmental, municipal and private research institutions was formed. Research activities expanded in the higher educational establishments.

With lifting a ban on the nuclear researches by the US occupational authorities the inquiries into the nuclear physics resumed. The inquiries of the Japanese scientists into the quantum theory of field (**Sin-Itiro Tomonagi** was awarded the Noble prize in physics in 1965 and became a foreign member of the USSR Academy of

Sciences in 1971), in semiconductor electronics (**Leo Esaki**, the Noble prize in 1973 for development of the negative-resistance diode), in the applied mathematics, software for computers etc. have been internationally acclaimed.

The Japanese schools of structural chemistry, radiochemistry, chemistry of polymers, biochemistry of plants and general biochemistry, chemistry of biologically active substances, pharmacological chemistry and biology have made their mark. In medicine Japan has achieved considerable successes in struggle against leukoses and radioactive poisoning, chemotherapy of various groups of illnesses and oncology.

Based on wide research inquiries the industrial use of microbiological synthesis was first ever launched in the world.

Much attention is paid to researches into the environmental issues. Japan became one of the first world centers for geological-geographical sciences, resources study science, regional geography, vulcanology and seismology, forecasting of typhoons and tsunami.

Already since the middle of the 50s Japan began to develop a space program. In 1970 Japan launched successfully its first artificial earth-circling satellite. The level of expense for scientific-research work has gradually increased outpacing the national income growth rate. On average for 1955–1975 expense for research and development increased 2–2.5 times for each five years. A major share of expense for R&D falls to the private sector – 70–75%. A special focus is laid on five major national research programs: environmental protection, development of data processing facilities, nuclear energy, space, and study of the World Ocean.

As Article 9 of Japan's constitution bans the establishment of any national *armed forces*, the country maintains only the Self-Defense Force of 273 thous. people, i.e. less than 0.22% of a total population number. However, the Self-Defense Force is a full-fledged army in actual fact, and one of the most technically fitted out in the world at that. By the level of combat effectiveness the Japanese troops are evaluated as one of the best in the world.

Nowadays the Japanese army has no nuclear weapons. According to the established opinion, it is prohibited for Japan. Nevertheless, this is only an oral obligation. No legal bans on nuclear weapons exist for Japan.

In the 70s the Japanese science closely approached the creation of nuclear weapons, however, by resolution of the leadership of the country further works were ceased in this direction. Nevertheless, accord-

ing to the experts Japan has an opportunity to launch a production cycle of nuclear weapons for a period from three months to one year.

By military expense – more than 4.7 trln. yens annually (about USD 44 bln.) – Japan is stably among the five leading countries of the world and occupies the third place in the world among non-nuclear powers.

A finding may be made that in recent years a new period of military construction has begun in Japan. The debates on the permissibility of fitting the Self-Defense Force with short-Range missiles (the Japanese army has tactical missiles from the beginning of the 80s) conducted from December 2004 at the parliament prove it.

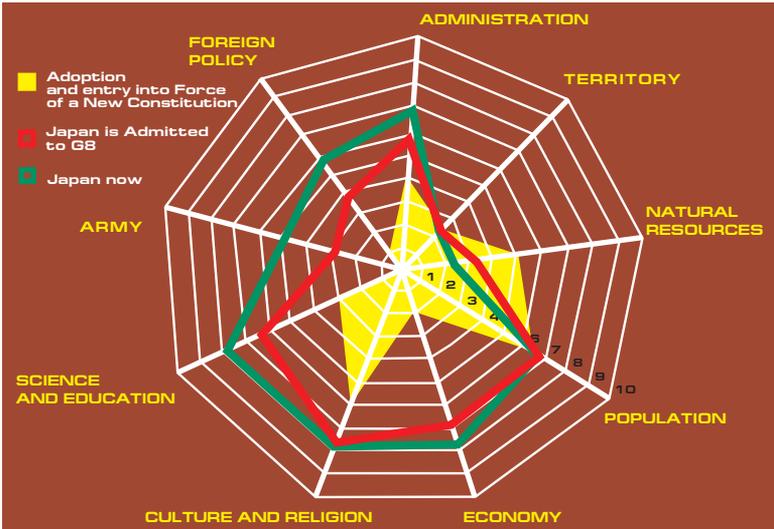
A matrix of contemporary Japan is given in *fig. 19.13*.

### **19.3.5. Outlooks of Japan in the 21<sup>st</sup> c.**

Under the scenarios of global development Japan might occupy one of the following positions in the foreseeable future: a junior partner of the USA (pessimistic scenario), equal ally of the USA or other leading world power (moderate-pessimistic and moderate-optimistic variants); a component of the so-called Federation (confederation) of the APR countries (optimistic variant). Apart from Japan, this federation might include China, Korea (united) and a number of other countries of the region. A unique combination in Japan of specifically determined interests of the country and a relatively lower (as compared to other leading world powers) level of national self-identification establish special original data in forecasting of the development of the state for a long-range period according to these scenarios. This specific feature is in a high probability that Japan will retain its existing objectives under any variant of development. The difference will be only in the methods they will be implemented – in the union with the USA or as a part of the said new state formation. In the intermediate variants Japan will retain its state identity.

A search for an optimal strategy of development of the country in the post-industrial period under globalization instead of a post-war model that has depleted its resource, based on a wide involvement of the state in economic and social processes is a key problem of modern Japan. In this connection the essence of the development course of the *system of state administration* pursued by the Japanese government is in reducing of the role of the state in economy and concur-

Figure 19.13

**Strategic Matrix of Japan in Contemporary Period**

rent development of the private sector of economy, in accelerated development of new technologies. In view of a unique combination of conservatism and responsiveness to innovations in the Japanese mentality, i.e. a high extent of its stability, it is difficult to anticipate to a high degree that the present structure of power will persist in future. However, possible changes are likely to be of a subjective nature without a long-term effect. Nevertheless, it is quite possible that the methods how authority acts will be modified as a result of the employment of the latest achievements in information technologies. It will permit, on the one hand, to expand the opportunities of community to control the actions of the government, on the other, it will provide the government with nearly unlimited opportunity to influence the masses and form necessary concepts and views on these or those issues.

Furthermore, under conditions of a next period of «self-identification» that Japan experiences in the period of globalization, a high probability that the country will take the path of deep integration with other states should be taken into account. The USA and China should be deemed as major partners in such case.

In the first instance it might occur by further strengthening and deepening of allied relations with Washington with a gradual dele-

gation of a part of state powers. It is exactly today's development of the Japanese-US relations as a matter of fact. Nevertheless, further consolidation of ties with the US may be taken in Asia as actions against China and all Asian community in general, which is fraught with confrontation of Japan with its near neighbors, which it is definitely trying to avoid.

Convergence with China may be based on the related national cultures, geographical neighborhood and mutual penetration of economies. The major problem in the establishment of such union would be the US reaction.

In the period under consideration *territorial development* of Japan will be aimed at the settlement of excessive population issue. The most preferable variant of that is reaching the agreement with Russia on so-called disputable northern territories. The forms of such agreement may be either full delivery of Russia's four islands of the South Kuriles Range or their joint use by both parties. Despite a seeming advantageousness of the second option for Russia, in actual fact it will mean in any case a loss of the islands as in some period of time these islands will be fully peopled by Japanese. The Russian population, even after obtaining preferences promised by the Japanese (option to get a dual nationality, perpetual visas or non-visa visit to Japan) will leave the islands and go to the continent as a matter of fact after it finds itself in the alien environment.

In the more distant future — in the second half or even at the end of the 21<sup>st</sup> c. if crisis phenomena persist in Russia or the country turns out in the state of stagnation — Japan is likely to expand its territorial demands already with respect to Sakhalin.

Despite a seeming acuteness of the *natural resources* problem, it is not that acute for Japan as it seems exteriorly. First, Japan successfully pursues the policy of moving material-intensive production outside the islands retaining the functions of ownership and management only, and mainly developing only science-intensive and high-tech industries within it.

Second, Japan is actively introducing the replacement plans of most deficient kinds of raw materials and materials with other. The plutonium program may be taken as an example with its objective to create the reserves of plutonium in the country for a change-over of all heat power plants in the country to the nuclear base in a short period and their operation during a long period of time. The pluto-

mium reserves will be enough to the Japanese to ensure the demands of the country for 150–200 years already now according to the specialists. Besides, in Japan the activities are well underway in the sphere of hydrogen power engineering.

Third, Japan is one of the world leaders in utilization of the World Ocean. By the middle of the century at least two thirds of future demands of the country in these or those resources will be produced from it. According to the Japanese scientists, this research trend is one of basic and most promising as it is able to ensure in full nearly any demands of national economy that improves significantly its competitiveness.

One of major external factors of development of *economy* of Japan in future is a possible option of the so-called national self-identification, which we've already examined with respect to the «State Administration» factor. But in any case whether the country remains independent or league with the USA or China, in general Japan's economy has all grounds for successful development and remaining of one of leading in the world. And it is despite Japan has entered the stagnation stage at the beginning of the century (2001–2002, GDP growth rates made 0.3% to 1.9% in general in the world and 1.6% in the countries with high income).

One of the determinative features of local economy will be the increasing role of Japan as a financial and technological donor in the foreseeable future, first of all among the Asian states.

**Culture and religion.** In view that Japan had to solve the issue of self-identification at least three times in various periods of its history and preserving its originality under «internalization» it might be assumed that it would succeed in doing the same in future. The Japanese culture will still be a noticeable phenomenon in the world cultural life. And what is more a whole scientific direction exists in the country, and its followers believe that it is the Japanese nation with its universalism is able to become the source and the nunciate of a new global civilization. Admittedly, there is a quite opposite viewpoint.

Buddhism in a combination with Shintoism still remains the major religion. A typical feature of religious development will be a permanent existence of those organizations as a part of religious structures that have a radical, apocalyptic direction (like Aum Shinrikyo). Although the number of the followers of such organizations will not be very considerable in a total mass of believers,

but their actions are able to influence radically the internal political situation.

**Science and education.** The governmental policy of encouraging science, national intellectual traditions combined with a powerful scientific base, many scientific schools and introduction of the advanced information and communication features will permit Japan to retain and consolidate its position as one of the leading scientific powers in the world. Besides fundamental researches the priority scientific trends will include ecology and power engineering, space, oceanology and use of sea resources, information technologies and communications, biology and gene engineering in the foreseeable future. Apparently, the achievements of Japan in these fields will be most considerable.

**Population of Japan,** according to the UN demographic forecast (middle variant), will begin to decline from 2020 and it will make 109.7 mln. people up to 2050; and the mean age will increase from 41.3 to 53.2 years, and the average anticipated life span – from 82 to 88 years. A share of able-bodied population will considerably decrease making serious problems for Japan.

**Foreign policy.** A key foreign policy problem to be settled by Japan in the 21<sup>st</sup> century is whether or not the country should claim a quite responsible status of a «super world power» or if a quite more modest position of a regional state is enough? On the one hand, Japan occupies firm positions among developed industrial powers; it is highly authoritative in many international organizations and has all chances to become a permanent member of the UN Security Council. On the other hand, the Japanese themselves extremely rarely speak out the claims to a super power status, i.e. public opinion does not support such goals.

In the near future this problem might be partially resolved by a forming now paradigm of the regional, Asian leadership in the Japanese policy. It is pursued by increasing a share of Asian neighbors in the Japanese trade-economic contacts and strengthening positions of Tokyo as a mediator between Asia and the West and as a representative of Asia's interests in the world. On the other hand, the Asian community has not overcome a complex of a failure of trust to Japan firmly established in public consciousness of the countries that experienced the Japanese militarism on them from the end of the 10<sup>th</sup> c. to the middle of the 20<sup>th</sup> c.

Thus, although quick changes in the line of foreign policy of Japan are unlikely, in the 21<sup>st</sup> c. its significance in Asia and other regions of the world is likely to increase.

**Armed forces.** The problem of determining a line of foreign policy of Japan is reduced to a military-political component whether or not it will be a military power. Although in recent years some amendments were made to the laws of the country, it is obvious that Japan will not participate in warfare in the near future, except the UN operations. It will adhere to a traditional policy in security based on three pillars – a military union with the USA, ability of the country to self-defense and maintaining stable international relations. However, in view of the fact that the Japanese has already taken part in the US-Iraqi war of 2003, it may be viewed that the «the bottle with the jinn has already been uncorked» and the issue of introducing regular amendments to the laws of the country permitting the establishment of a full-fledged army is just the matter of time.

One of major trends in the development of the Japanese armed forces is the development of air forces national system of ballistic missile defense and space force alignment (in the fore-

Figure 19.14

**Strategic Matrix of Japan to 2080**

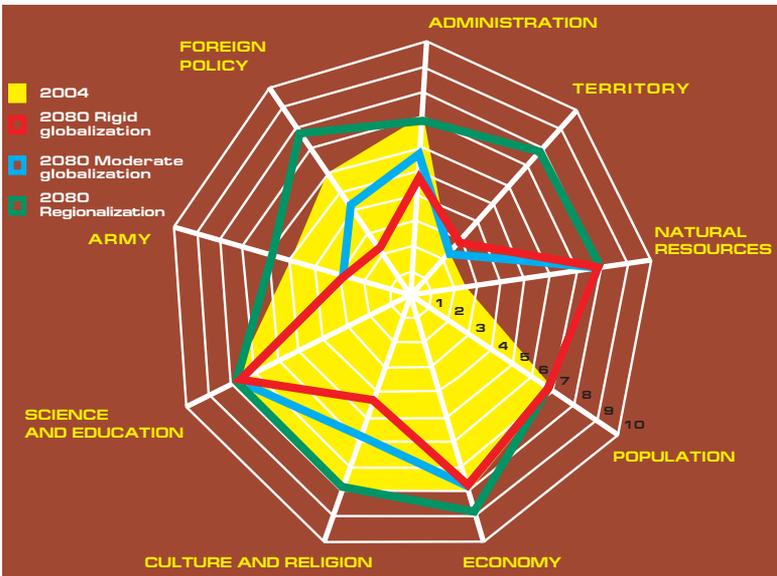


Table 19.3

**Changes in Major Parameters of Japan by  
Indicators of the Strategic Matrix  
(3<sup>rd</sup> c.— end of the 21<sup>st</sup> c.)**

Event	Date	Indicators of the Strategic Matrix								
		Adminis- tration	Territory	Natural resour- ces	Popula- tion	Economy	Culture and religion	Science and educa- tion	Army	Foreign policy
Ancient Centuries										
Yamato state	3 <sup>rd</sup> c.	2	1	6	1	2	1	1	2	1
Regency of Shotoku Taishi. emergence of the Japanese Empire	593– 621	3	2	6	1	3	1	2	2	2
Beginning of the Taika's reforms	645	3	2	6	2	3	1.5	2	3	3
Middle Ages										
Introduction of the Code of Taiho	701	3	2	6	2	3	3	2	3	3
Establishment of the Minamoto Shogunate	1192	4	3	6	2	3	3	3	4	2.5
Establishment of contacts with the Europeans	1543	4	3	5	4	3	4.5	4	3.5	3
Pursuance of «self-isolationism» policy	The first half of the 17 <sup>th</sup> c.	3	3.5	4	4	2	4	2.5	3	2
New History										
Restoration of Meiji	1868	4	3	7	8	3.5	5	2	4	4
Russian-Japanese and World War I	1905– 1947	5	6.5	7	9	5	8	3	5	5
Japan enters World War II	1940	6	7.5	9	8	7	8	5	8	7
Contemporary History										
Adoption and entry into force of a new constitution	1946– 1947	4	2.5	5	6.5	2	6	3	0	1
Japan is admitted to GB	1976	6	2.5	3.5	7	7	8	6.5	3	4
Present day	2004	7	2.5	2.5	7	8	8	8	5	6
Forecast										
Rigid globalization	2080	5	3	8	7	8	4.5	8	3	2.5
Moderate globalization	2080	6	2.5	8	7	8	6	8	3	4.5
Regionalization	2080	7	8	8	7	9	8	8	6	8

seeable future – to solve the task of intelligence preparation and communications). In the more distant future after amending the laws, the increase of the number of the Japanese army to 500–600 thous. people and its fitting out with long-Range precision weapons (not only operational-tactical, but strategic) should be anticipated.

A strategic matrix of Japan for an outlook to 2080 is shown in *fig. 19.14* and *table 19.3* (under three scenarios).

## 19.4. Strategic Matrix of Iran<sup>1</sup>

### 19.4.1. Ancient Persia (558–359 B.C.)

Iran (Persia) is the country of ancient civilizations. Already in the 4<sup>th</sup>–3<sup>rd</sup> millennium B.C. an original primitive culture existed on the territory of today's Iran. The ancient inhabitants of this country were the tribes of hunters and cattle-breeders, who later formed the unions. In the 3<sup>rd</sup> millennium B.C. in the valley of the Karun river the ancient state formation, Elam, emerged with its capital in Susa. In the 9<sup>th</sup> and 7<sup>th</sup> c. B.C. in the Northwest of the Iranian highlands and a part of the Azerbaijani territory the Median tribal union was formed. In the 7<sup>th</sup> c. B.C. the leader of the Medians Phraortes conquered the Persian tribes, who inhabited the southern part of the Iranian highlands and formed an extensive union of tribes in one of the regions of Elam by that time – Anshan. In struggle of the Persian with the Medians the union of the Persian tribes considerably strengthened. In 553 B.C. one of the first Persian kings **Cyrus** (558–529 B.C.) from the noble ancestry of the Achaemenids rebelled against the Medians. The rebellion of Cyrus ended in 550 B.C. with a clear victory of the Persians.

After subjugation of Media Cyrus continued military campaigns and in 546 B.C. he conquered Lydia and the Greek polities-states on the coast of Asia Minor, and in 538 B.C. – Babylonia. The union of tribes turned into the slave state eco-

<sup>1</sup>This section is made by **A.I. Ageyev**, Doctor of Economy, Professor, Academician of the Russian Academy of Natural Sciences, and **B.V. Kuroeydov**, Candidate of Military Sciences

nomically based on slavery and agricultural communities. The successor to Cyrus, **Cambyses**, attacked Egypt in 526 B.C. and conquered all the valley of the Nile. However, further military operations of Cambyses failed, as in Media and other countries conquered by the Persians in 523–522 B.C. commotions began: population suffered from heavy duties and forced participation in invasive campaigns of Cyrus and Cambyses.

One of the junior representatives of the Achaemenids – **Darius I Hystaspes** (552–486 B.C.) headed the rebels. After he ascended the throne he divided the whole state into a number of regions (satrapies) and determined the size of tribute for each of them to be regularly paid to the king's fisc. Darius began to construct actively the roads between the prime cities, established communication service and reorganized the army completely.

Under the reign of Darius Persia finally formed as a centralized slave despotism headed by the «king of kings». Most population (free community members and slaves) farmed the land and were formally deemed the property of the «king of kings», but in actual fact they were owned by the arable communities. Orientation to extensive, irrigation farming made the Persian power drive constant wars on neighboring countries in order to take prisoners and turning them into slaves as well as to replenish mineral resources. By the end of the 6<sup>th</sup> c. B.C. the Persian Power included Persia, Asia Minor, Thrace, Macedonia, Babylonia, Egypt, Phoenicia, Syria, Palestine, a part of Transcaucasia and Central Asia, Arabia and Northwestern India (*fig. 19.15*).

In 500 B.C. the revolt of the Greeks of Asia Minor against the Persian dominance occurred. After suppression of the revolt Darius I tried to conquer the European part of Greece. However, the Greco-Persian war under the successor to Darius I – **Xerxes** (486–465 B.C.) ended with a complete failure to the Achaemenids, and its possessions on the coasts of the Aegean Sea seceded from the Persian power. Only after a protracted war and a skillful use of the differences between the Greek polies, Persian king **Artaxerxes II** (405–359 B.C.) got again the power over the Greek polies in Asia Minor and the Cyprus Island. At the end of the 5<sup>th</sup> c. B.C. as a result of the revolt against the power of Persia Egypt was liberated and maintained its independence during next 65 years. Junior

brother of Artaxerxes II Cyrus revolted against him. Although the revolt was suppressed, it demonstrated the inner weakness of this huge power, which was convulsed with rebellions in the satrapies again and again in their seeking of political independence.

**System of administration** in the period under consideration passed various stages in its development – from matriarchy to a slave state. Centralized slave despotism completed the development of the forms of state administration in ancient Persia.

The milestones in the development of the state administration include the union of the Persian tribes under the reign of King **Cyrus the Great** (558–529 B.C.) and further strengthening of Persia under the reign of his successor **Cambyses** (529–523 B.C.). This period is characterized by a centralization of the state. The reign of the «king of kings» **Darius I Hystaspes** (522–486 B.C.) is rightly viewed the «Golden Age» in the history of Persia. It is exactly when the formation of Persia occurred as the world empire. The communication service established by Darius had no analogs in any state that existed that time. Darius conducted numerous reforms aimed first at strengthening of the state and power of slave-holders.

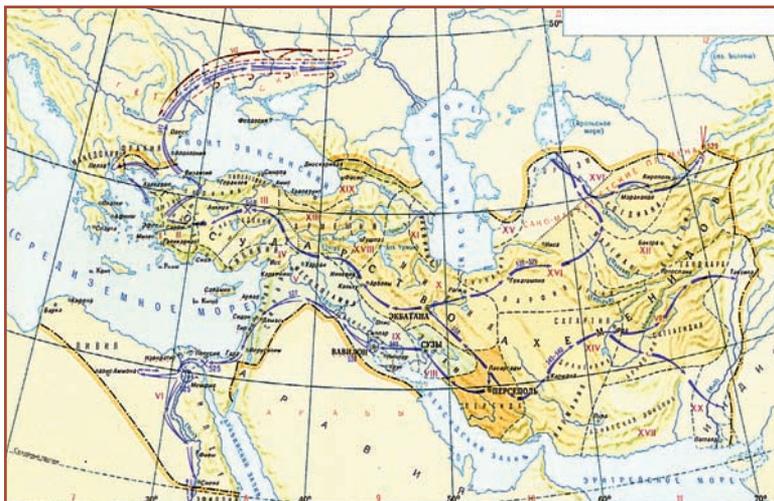
Thus, the status of ancient Persia by the «Administration» parameter may be determined as the «Great Power» by the end of the period under consideration.

The following circumstances determined the direction of the vector of **territorial development**. Forming the Persian tribes into the united state; subjugation of its neighboring tribes; consistent expansion of the territory due to invasive wars and concluded alliances. The prime events of the cycle are a defeat of the Medians in 550 B.C. under the leadership of Cyrus and subjugation of the regions of the ex-Median power; conquest of Lydia, a part of Greece, Asia Minor, Babylonia and Egypt. In 522–514 Darius also conducted numerous invasive campaigns. By the end of the 6<sup>th</sup> c. B.C. the Persian power turned into one of the largest states of that period.

The prime **natural resources** of ancient Persia included copper, bronze, iron, stone, wood, clay, leather, silk and wool. Persia was an absolutely self-sufficient state by its reserves and extent of development.

By the beginning of the conquest of the country by Alexander the Great the **population** size may be estimated in

Figure 19.15

**State of Achaemenids**

40–55 mln. people. More than 20 states and nations were united into one power. The city construction boomed.

**Economy** is marked by the development of farming, husbandry, crafts, and trade. Rural communities and later slave-trade made an economic base of ancient Persia for a long period of time. Darius I carried out a monetary reform by establishing a uniform golden coin for all the state (darik – 8.4 g of gold) and the size of tribute from each region of the country. Numerous invasive campaigns and control over trade roads also conducted to the replenishment of the fisc.

**Culture and religion** developed under the influence of heathen customs. Already in the 6<sup>th</sup>–4<sup>th</sup> c. B.C. clear dimensionality indicating a wide employment of writing and early development of the art of poetry may be traced in the ancient monuments in the ancient Persian languages, cunieform plates and sacred book Avesta. The level of development of art and architecture was high. Painted ceramics from Susa, Persepolis and Asfahan, Luristan bronze, architectural palace complexes in Pasargadae, Susa and Ecbatana are most striking examples of the development of art.

**Science and education** of ancient Persia were completely concentrated in the hands of the priesthood.

In the Achaemenid period *armed forces* made one of the most perfect military structures of the world. Reorganization of the army implemented by Darius permitted to establish the armed forces that were able to wage wars actively and successfully. The size of the army ranged from 100 thous. to 1.7 mln. people in the various periods of the Achaemenid reign, and the navy numbered up to 1,200 vessels.

The basis of *foreign policy* was a desire to extend its influence to other countries and tribes. Cyrus, Cambyses, Darius, Xerxes and Artaxerxes steered a consistent course to expansion of the state due to constant invasive wars. By a set of indicators Persia corresponds to the status «Great Power» that period (*fig. 19.16*).

In 330 B.C. the Achaemenid Power failing a strong economic and administrative base disintegrated under attacks of the troops of **Alexander the Great**. They conquered fast all western part of the Iranian highlands; however they met a vehement resistance in its east and Central Asia (Bactria, Khorasm and Sogdiana). These regions were conquered by 327 B.C. only.

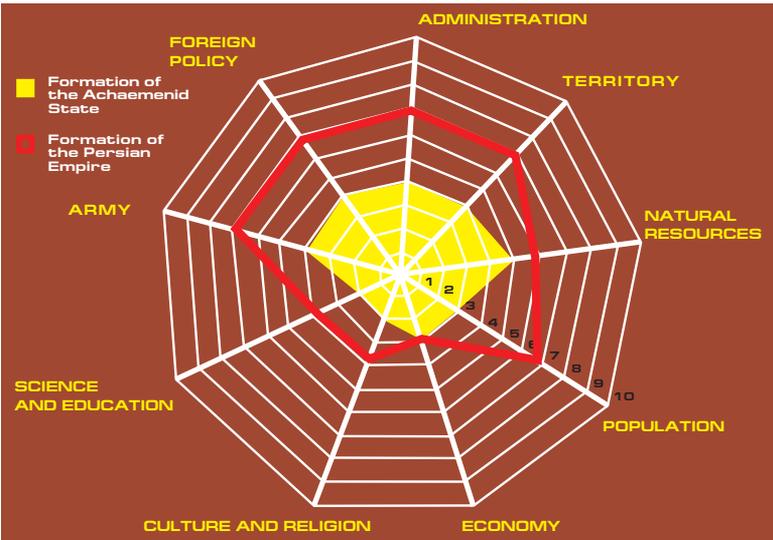
The conquest of Persia by Alexander the Great inaugurated the beginning of the Hellenism period. Alexander and his successors founded many new cities in the countries of Near East, mainly on the crossings of trade roads. As a result the trade exchange between the states of Europe and Asia intensified, which promoted the growth of commodity-money relations, and also farming and slavery. From the end of the 4<sup>th</sup> c. B.C. the Persian lands made a part of the Seleucid state, and in the 3<sup>rd</sup>—2<sup>nd</sup> c. B.C. — the Parthian Kingdom. The same way as the Achaemenid power it constituted an unstable conglomerate of tribes and nationalities and existed not long.

#### **19.4.2. Persia in the Crisis Period of Slavery Relations (226—651 A.D.)**

The crisis of slavery relations at the turn of the 2<sup>nd</sup>—3<sup>rd</sup> c. A.D. was brought about by increasing social contradictions. Under conditions of aggravated internal political struggle the ruling upper circles of Persia seeking to maintain its power both over their country residents and conquered nations exerted every effort to consolidate the state.

Figure 19.16

**Strategic Matrix of Ancient Persia  
(6<sup>th</sup>–4<sup>th</sup> c. B.C.)**



The *system of administration* is characterized, on the one hand, by attempts of satrapies to get political and economic independence, on the other — a desire of the Persian shahs to concentrate all power in their hands.

Aristocracy and Zoroaster priesthood of the Fars region undertook the initiative to make a strong state. In 226, **Ardashir I**, son of the ruler of the Istakhr principality achieved victory over the troops of Parthian king **Artaban V**. Proclaiming himself the «king of kings» Ardashir (226–241) started the reign of the Sasanian dynasty in Persia (226–651). It extended his power to a number of other regions, which had been a part of the Parthian power before. For centralization purpose Ardashir I divided the state into several vice-regencies, each of which consisted of 2–3 satrapies.

**Territory.** With a loss of Egypt, Asia Minor, the Mediterranean islands, a part of west India and inclusion of a considerable part of territories in the Parthian state, Persia lost its status of the great power.

**Natural resources.** The prime natural resources of Persia still remained copper, bronze, iron, stone, wood, clay, leather, silk and wool.

**Population.** Ardashir I regulated the caste-estate structure of society. In Sasanian Persia three privileged castes existed: priests, warriors and officials. Non-privileged strata included husbandmen, cattle-breeders and craftsmen. The Sasanian shahs pursued policy of enslavement and forced assimilation towards the Non-Persian peoples. Revolts not once burst out among depressed peoples ruthlessly exploited through taxes and often assumed the form of protection of local religions persecuted by the Sasanians. The size of population in Persia considerably reduced that period and according to approximate estimates it made 18–22 mln. people.

**Economy.** A relative consolidation of the shah power, establishment of the Sasanian monarchy fostered a further growth of productive forces. In the 3<sup>rd</sup>–4<sup>th</sup> c. many new settlements and cities sprang up in Persia, many of them were transit points on a large trade road from Europe to India and China. The capital of the Sasanian shahs – Ctesiphon – was famous for fabric making and articles made of metal. A relative recovery of business life of the state was mainly due to exploitation of husbandmen – community members and their gradual enfettering by the nobility transforming into the feudalists.

In the 6<sup>th</sup> c. an early feudal state with the survivals of pre-feudal relations formed in Persia. Shah **Khosrow I Anushirvan** (531–579) carried out military and administrative reforms, established the system of land and capitation taxes that collected partially in kind and partially cash. It meant a formal consolidation of the power of the Persian feudalists over direct producers. The significance of the merchant-usurious upper circle increased.

The development of feudal relations in Persia was connected with the emergence of large, economically independent economies. Along with the aristocratic families Zoroastrian temples remained large landowners. Feudalization of the country resulted in economic separation of certain fields and weakening of Persia.

**Culture and religion.** Zoroastrianism was proclaimed official religion for a complete unification of the state under the power of the Sasanians. Popular movements that assumed the form of religious struggle indicated the aggravation of social contradictions. **Mani**, a native of Mesopotamia (2<sup>nd</sup> half of the 3<sup>rd</sup> c.) headed one of them – Manichaeism. The ideas of Mani with their deep pessimism found an active support among ordinary people who suffered under oppression of the feudalists. A follower of Mani, **Mazdak** headed a powerful popular movement (began in 488), which mainly

embraced by the peasantry. Mazdak called for an active struggle for equality of all people, revival of communal property to land and implements of production.

Religion had a determinative influence on culture. As the dogmas of Zoroastrianism did not encourage religious painting, this type of art was implemented only as a secular monumental painting and book miniatures.

**Science and education.** Such works of literature appeared at that period as an extensive book of religious and epic stories of the Iranian tribes «Khwaday Namag», which included also official chronicles of the Sasanian dynasty; «The Book of the Deeds of Ardashir, son of Babak», fables «Kalila wa Dimna», and numerous didactic works. Only priesthood and individual representatives of nobility still had a chance to pursue science and learn.

**Army.** The state was divided into military toparchies, the number of which changed. The top officials in garrisons at the major strategic points, fortresses etc. were held by the Persians. The Persians and Medians made the core of the army. A larger part of adult male population of the Persian had to serve in the army. Mercenaries and detachments supplied from satrapies made at least one third of it. The army included cavalry and infantry. The cavalry was recruited from the nobility, and the infantry – from the husbandmen. Concerted actions of cavalry and archers ensured victories to the Persians in the battles. The backbone of the army was 10 thousand «immortal guards»; its first thousand armed with lances consisted mainly of representatives of the Persian nobility and was the lifeguards of the king.

**Foreign policy.** In the 3<sup>rd</sup>–4<sup>th</sup> c. Persia struggled with the Roman Empire for the possession of the Upper Mesopotamia, Syria, Armenia, countries of Transcaucasia and the dominance over the caravan tracks that connected the Mediterranean with India, Central Asia and China. Wars waged with a varying success. Thus, in 387, the Sasanians concluded an advantageous treaty with Rome under which they divided equally the countries of Transcaucasia. Relations with Byzantium were mainly peaceful. As in the 5<sup>th</sup> c. both powers had to repulse the attacks of nomads fostered such relations. In the 6<sup>th</sup> c. the situation changed: Persia entered into a debate with Byzantium for the dominance over caravan tracks and possession of the Mediterranean and Black Seas.

Thus, considering all components and indicators that describe Persia in the 2<sup>nd</sup>–6<sup>th</sup> c. a funding may be made that it was a mighty regional power (*fig. 19.17*).

### 19.4.3. Persia in the Middle Ages (middle of the 7<sup>th</sup> – beginning of the 10<sup>th</sup> c.)

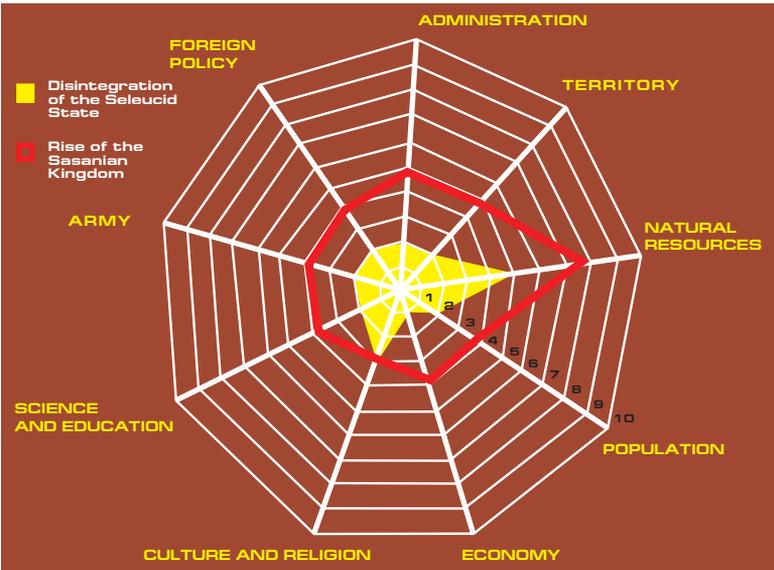
In the first half of the 7<sup>th</sup> c. a new state – the Arabic Caliphate – took on the prime significance in the life of the Mediterranean countries and Western Asia. A political unification of Arabia in 630 coincided with the emergence of a new syncretic religion – Islam. The successors of Mohammed – caliphs – subjugated to their influence approximately two thirds of former possessions of Byzantium: Syria, Egypt, North Africa, and also all Sasanian Persia.

**Administration.** The Arabs conquered Persia (Iran) easily, as it was extremely exhausted by a long war on Byzantium, internal disagreements, separatist aspirations of feudal rulers and the weakness of the central power therewith.

In 633–642 the western areas of the Sasanian state submitted to the Arabian Caliphate (northern and eastern areas were conquered much later). The Sasanian State disintegrated, and in 661 its lands made a part of the Omayyad Caliphate. In need of literate officials the Arabs retained for service Persians and Greeks at public institutions (divans).

The feudalization, uprising of the people and civil discords of the feudalists led to an actual disintegration of the Caliphate, which represented an unstable conglomerate of individual countries, into a number of hereditary vice-regencies. Tahirids (821–873) ruled in Khurasan, Saffarids (867–908) – in Herat, Fars, Kerman and Sistan. In 900 the Samanids founded the state with the center in Bukhara and then they extended their power to southern and western Persia. In 932–1055 western Persia fell under the Shiite Persians power – Bujiden (or Buyid) who conquered Baghdad in 945 and made an end to the secular power of the Arabic Caliphate. At the end of the 10<sup>th</sup> c. Khurasan joint **Mahmoud Ghaznavi**, and in 1040 it was conquered by the Seljuks who subjugated all Persia under sultan **Alp Arslan** (1063–1072). In the 12<sup>th</sup> c. only Khurasan remained under the power of the Seljuks, and after the death of **Sanjar** Sultan (1118–1157)

Figure 19.17  
**Strategic Matrix of Persia in the Period  
of an Early Feudalism**



the Ghorides Tadjik Dynasty ruled this area. Several independent feudal dynasties warring on each other formed in other regions of Persia.

**Territory.** After the conquest of Persia by the Arabs no clear-cut frontiers remained – the country was broken apart into individual domains of caliphs. By the end of the 7<sup>th</sup> c. the territory of Persia acquired the outlines of modern Iran within the boundaries of the Omayyads and Abbasid Caliphates.

**Natural resources.** In the Middle Ages the major natural resources of Iran were wool, cotton, precious stones and metals. At the same time more than 40% of resources were imported to the country from numerous kingdoms and lands conquered by the Arabs.

**Population.** The Arabic conquest changed radically all spheres of life of Iran, including national structure of the country. The Arabs, whole their tribes moved to the territory of Persia, and other conquered countries; whole urban quarters populated with the Arabs sprang up. While the number of the Persians dropped in the caliphates of that period and made 12–16 mln. people.

**Economy.** As a result of the conquests enormous land reserves fell to the hands of the Arabic nobility. Partial confiscation of property of the Sasanian nobility did not prevent the establishment of the union of the Arabian and Persians feudalists, however, not lacking some internal contradictions. By the end of the 7<sup>th</sup> c. the feudalists actively conquered communal lands and increased taxes considerably (apart from the land tax — kharaj, poll tax was introduced — jizya payable by all non-Moslems in the caliphate). All Persia of that time was involved in anti-feudal and liberation movements of peasants and city plebs that assumed the form of a religious sectarianism — Kharijism.

**Culture and religion.** The Arabs implanted Islam in Persia, ruthlessly destroying ancient pagan customs and by the end of the 10<sup>th</sup> c. it became a religion of the majority of population. The Arabic domination also meant the spread of the Arabic language in Iran as the language of literature and religion, and from the 7<sup>th</sup> c. — as official too.

**Science and education.** The Arabic language that assumed international significance for the countries of Western Asia and North Africa became prevailing in literature and poetry of Iran for a long time. In the 10<sup>th</sup> c. the literary language *Farsi* (New Persian) close to daughter spoken languages — Persian and Tadjik formed in Iran. **Firdusi** (940–1020–30) became the greatest poet who wrote in Farsi. His grandiose epic «Shahnameh» («The Book of Kings») is a poetical refinement of folklore — a heroic epos and official history of the Sasanian «Book of Kings Rulers».

**Army.** The detachments of mercenaries and slaves — gulams — played a noticeable role in the troops of the caliphs, and also the troops of large and petty feudal rulers along with regular formations. **Al-Mutasim** (833–842), Abbasid caliph was the first who formed the horse guards from gulams — the youth brought from various countries by the slave-merchants, and then such military formations appeared with other emirs and great feudalists. The guards consisted of people alien to locals, and it could be thrown to suppress revolts. In the Omayyads state as well as in the Abbasid and Sasanian states the warriors got life land for services.

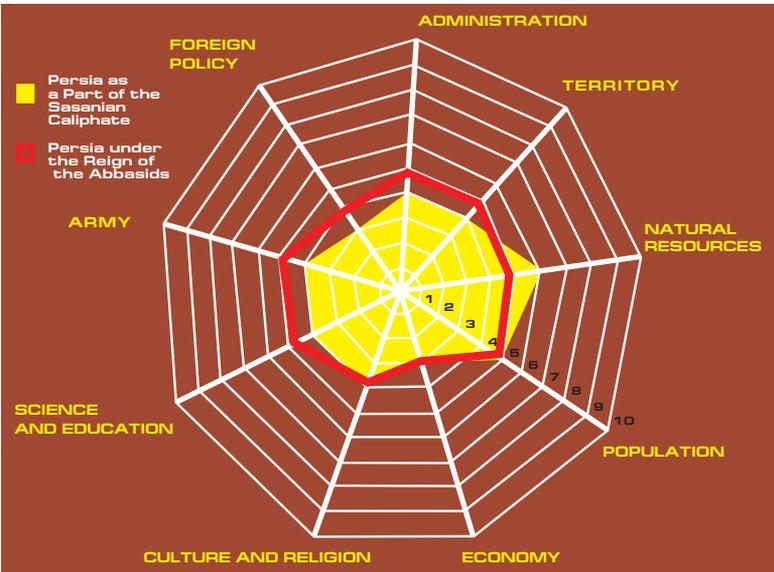
**Foreign policy.** Persia did not pursue an independent foreign policy in the period under consideration as in actual fact the state did not exist. Being under the power of the Arabic caliphates the Persian nobility studied only personal and separatist interests.

Analyzing the state of Persia at that time a conclusion may be made that its status as the state dropped to a critical point by all indicators when it may still be determined as a «Regional Power» (fig. 19.18).

In the 11<sup>th</sup>–12<sup>th</sup> cc. in the period of the dominance of the Seljuks sultans exploitation of husbandmen by feudalists intensified considerably. A food rent, and also share rent was its most widespread form. Besides, the husbandmen were obliged to maintain travelling officials, warriors, and merchants at their own account; work at the construction of roads, irrigation facilities etc. Already under the reign of Abbasid due to intensification of trade between individual regions of the caliphate, the system of commodity-money relations established itself in Persia, internal trade expanded. In the cities – centers of trade and crafts – active construction was underway. A section of free craftsmen strengthened here, craftsmen and merchants shops emerged; the city upper circles, rich merchants and usurers invested their capital in land. By the end of the 12<sup>th</sup> c. nearly the whole Iran was ceded to the Khorezmshah state, the tax

Figure 19.18

**Strategic Matrix of Persia**  
(middle of the 7<sup>th</sup> – beginning of the 10<sup>th</sup> c.)



oppression of the subjects — rayats — by officials intensified. The imposts were estimated arbitrarily, the shahs send military detachments for their collection.

Under Sultan Mohammed (1200–1220) the Khorezmshah state included, except Khoesma and Persia, the possessions of the Ismaelites in Khuzistan, also Azerbaijan and today's Afghanistan. But this huge power as its many predecessors was a colossus with feet of clay.

#### 19.4.4. Iran under the Reign of Mongolian Khans and in the Post-Mongolian Period (13<sup>th</sup>–15<sup>th</sup> c.)

The Mongolian inroad (13<sup>th</sup> c.) accompanied by destruction of tens of thousands people, sacking the cities and settlements became a real catastrophe for peoples of all countries, who fell under the Mongolian avalanche, including the peoples of Iran.

**Administration.** In 1258–1304, the lands of Persia made a part of the powers of Mongolian rulers Hulagus. In the 14<sup>th</sup> c. several feudal dynasties formed on the ruins of this state, and **Muzaffarids** (1313–1393) who made Isfahan their capital were most influential of them on the territory of Iran. In 1380–1393 Mongolian **Khan Tamerlane** conquered all Persia again turning its flourishing lands into the desert. In the middle of the 15<sup>th</sup> c. the country was rent by cruel, devastating discords between the sons of Tamerlane and his relatives. In South Azerbaijan and West Persia the struggle between local tribes, which ceased for a while, came up with a bang that established favorable conditions for the rise of the new Azerbaijani Safavids dynasty from 1502 extended its power to Persia, too.

In the reign of **Abbas I** (1587–1628) throned after long feudal distractions with the Khurasan feudalists, the Azerbaijani nobility lost the leading position in the state. The capital of the Safavid states was again moved from Tabriz to Isfahan. The government of Shah Abbas I rested in its activities on the Persian bureaucracy and landowners.

**Territory.** In the years of the domination of the Mongols Persia included the states of Chobanids in Azerbaijan, Jalairids in Armenia. The territory of Persia considerably exceeded the sizes of the country in the pre-Mongolian period.

**Natural resources.** A vigorous development of crafts and wide cotton growing permitted water resources to take the first place. At the same time traditional resources as clay, precious stones and metals did not lose their significance.

**Population.** The data of the size of population during the reign of the Mongols is scarce and contradictory. According to one source it made from 12–14, and according to other – 14–16 mln. people.

**Economy.** A destruction of productive forces of the countries conquered by the Mongolians became one of the reasons of further lagging behind of many peoples of the East in their socio-economic and cultural development. In the post-Mongolian period a special form of administrative-economic administration – institution of the *suyurghal*, which represented a further stage of development of the *Iqta* system of the Seljuk period of dominance, formed in Persia and some adjacent countries; in the 16<sup>th</sup>–18<sup>th</sup> c. *suyurghal* was replaced by the *tiyul* system in its turn.

The result of Abbas I reforms (temporal and partial relief of a tax burden in some regions of Persia, construction of irrigation facilities and roads) was a relative strengthening of feudal economy. Internal and external trade intensified where the shah fisc enjoying the monopoly right to trade in raw silk played an increasingly large role. The establishment of regular trade ties between Russia and Persia dates back to the beginning of the 17<sup>th</sup> c. In 1664 (under tsar **Alexey Mikhailovich**) Shah Abbas II vested the Russian merchants with the right to a free trade in all Persian cities. An economic rise of Persia of the 1<sup>st</sup> half of the 17<sup>th</sup> c. was shaky and became the result of merciless robbery and ruining of the conquered countries. Trade served the demands of feudalists and merchants. The cities remained the settlements of a semi-agricultural type; natural economy still prevailed. Under these conditions a relative strengthening of the system of money relations, a transfer of a part of taxes for payment in kind resulted only in strengthening of feudal exploitation, ruining of households of petty landowners, but not in the creation of a new method of production.

**Army.** In order to lessen the influence of the leaders of local tribes who were warlords and rulers of the regions Abbas I established a regular army and began to appoint *gulams* (common soldiers of the guards formed from the slaves) who time-expired at the shah service and replacing them. If local kinglets tried to resist, the shah inflicted cruel reprisals over them: the *Kizilbash* tribe – *takkalu* – was completely massacred.

**Foreign policy.** Its major vector was directed towards strengthening of trade and economic ties with neighboring countries and ensuring security from the eastern nomadic tribes.

During nearly two centuries Persia could not overcome the consequences of the Mongolian conquest — economic ruin and political disunity (*fig. 19.19*).

### 19.4.5. Persia in Modern Period (middle of the 16<sup>th</sup> — end of the 19<sup>th</sup> c.)

**Administration.** The reign of **Suleiman I** (1667–1694) Shahs and Hussein I (1694–1722) was a period of business decline, political decentralization and cultural regress.

Numerous revolts against the feudalists, liberation movements of enslaved peoples in answer to intensification of economic, national and religious oppression, separatism of feudalism resulted in an actual disintegration of the Safavid state.

**Nadir Shah** (1736–1747) established an extensive empire that represented an unstable military-administrative union. Apart from Persia Armenia, Azerbaijan, Dagestan, Georgia, a part of Central Asia, Afghanistan, Baluchistan and northwest India were forcibly annexed to it.

By the end of his reign Nadir Shah lost support from the chieftains of nomadic tribes who were displeased with the results of recent wars not bringing their spoils. The upper Shia clergy whose representatives became major feudalists from the time when Shiism was proclaimed established religion (beginning of the 16<sup>th</sup> c.), also took the side of the adversaries of Nadir Shah as he partially seized the lands owned by them and attempted (for foreign political reasons) to unite Shiism and Sunni. Nadir Shah perished in 1747 as a result of a military conspiracy. Persia disintegrated into several independent possessions, the rulers of which drove ruinous wars on each other until 1760 when **Karim Khan** — the chieftain of the Zand tribe — subdued to his power all Persia, except Khurasan. In his reign (1760–1779) the European merchants — colonizers who had already first appeared here in the first decade of the 16<sup>th</sup> c. began actively penetrating into the country.

Vehement internecine struggle that began after the death of Karim Khan continued until 1794 and ended with the victory of **Agha Mohammed Khan** from the Qajar tribe. The Qajars estab-

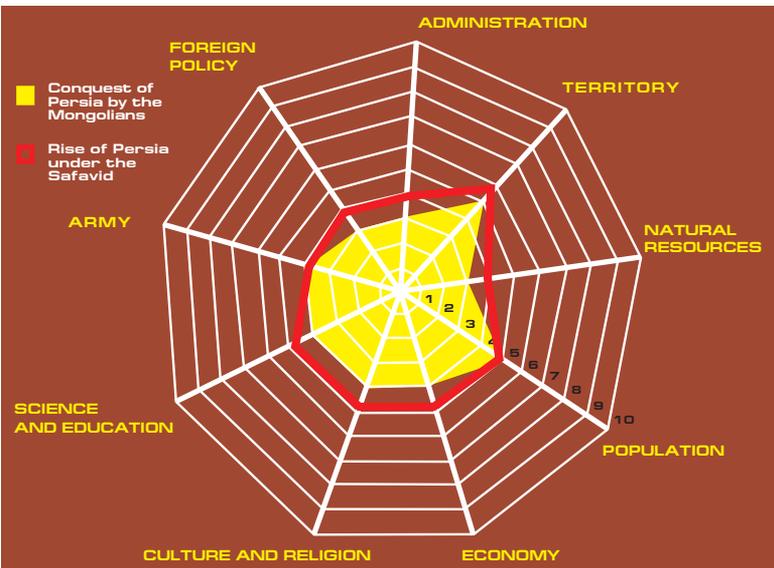
lished their power over southern Azerbaijan, Armenia, Kurdistan, Luristan and other areas and began robbing the local population on a regular base. In 1795 the troops of Agha Mohammed devastated all east Georgia, ruined Tbilisi and took more than 20 thous. of its residents as slaves. Agha Mohammed carried on one more ruinous campaign on Azerbaijan and Georgia. He was killed during this campaign. Nephew of Agha Mohammed **Fath Ali Shah** was proclaimed the Shah of Persia who also sought to enslave Georgia. However, this threat was prevented by joining Georgia to Russia on February 16, 1801.

From the 19<sup>th</sup> c. Persia became the arena of struggle between England and France for economic and political dominance in the East. Napoleon Bonaparte elaborated the plan of an overland campaign to India through Persia. As a counter to it in 1801 the British sent their mission to Persia, entered into the treaty with the Shah against both France and Russia and negotiated a number of benefits for them.

The rebels of the feudalists, which had already begun in the period of the second Russo-Turkey in the south of Persia and Khurasan,

Figure 19.19

**Strategic Matrix of Persia in the 13<sup>th</sup>—17<sup>th</sup> c.**



did not stop after its end. The sons of the shah who held the governors offices in Shiraz, Burujird, Hamadan and Mazanderan got out of hand. The Khurasan khans who rested on the support from ruler Herat rose also in revolt. The attempts of the Persian shahs to subdue Herat in 1833 and 1837–1838 failed. On October 28, 1841 a new treaty was signed between Persia and England, under which the British got additional benefits. Political and economic influence of England in Persia intensified since that moment.

**Territory.** The revolt of the Ghilzai Afghani tribe in 1709 completed with the secession of the Safavid state from Kandahar. In 1721 the Afghans headed by **Emir Mahmud** invaded Persia and occupied Isfahan. Soon a number of regions of the former Safavid state were conquered by the Turkish troops. The Turkish aggression against Armenia, Georgia, Azerbaijan and Persia endangered also the possessions of Russia sharing borders with it at that time. Liberation movement of the Georgian, Armenian and Azerbaijan peoples in the 20s of the 18<sup>th</sup> was closely connected with the Persian campaign of **Peter I**. Under the Resht Treaty of 1732 Guilan, Mazanderan and Astrabad were returned to the Shah. The treaty bound Persian not to ever transfer these territories to any power. By 1730, after a series of defeats the Afghans were banished from Persia. In 1736 after a long and intense struggle against the Turks the Persian-Turkish treaty was executed under which Mesopotamia passed to Turkey, and Armenia and Azerbaijan were divided between Turkey and Persia.

**Natural resources.** From the end of the 18<sup>th</sup> – beginning of the 19<sup>th</sup> c. oil became a major, strategic resource of Iran. Cotton, wool, silk, gum and leather also remained traditionally a major raw material export of the country. Water and sea resources of the state were harnessed actively.

**Population.** Before 1937 no accurate data on the demographic situation existed in the country. According to some sources, the population numbers of Iran made 23–25 mln. people that period.

**Economy.** Invasive, plunderous wars of Nadir Shah turned out to be disastrous not only for neighboring countries, but also for Persia. The population of the country was ruined under the burden of heavy taxes, the rates of which exceeded 3–4 rimes the size of tributes collected under the Safavids. In the 30s–40s of the 18<sup>th</sup> c. all regions of the state were involved in the anti-feudal movement. The struggle against revolts undermined the state.

In 1763 the English East India Company succeeded in obtaining the rights to own plots of land in Iran, construct fortified factories at the ports of the Persian Gulf. The agents of the company were exempted from payments of duties and taxes. Thus, the East Indian Company gave rise to the regime of capitulations in Persia.

Under the Kajar Dynasty the lands were still owned by the Shah, secular and clerical feudalists and the nobility of the nomadic tribes in the country. The peasant farmed land for an exiguous share of the yield; they were totally dependent on the feudalists. The captive population of Azerbaijan and Armenia was exploited more severely. The Kajars remained the old administrative division of the country into provinces and districts headed by relatives or close to the Shah.

The English industrialists turned Persia into one of the markets for sale of their goods; this undermined its backyard production and home industry. The destruction of home industry, craft and manufactory told heavily on all economy of the country. A translation of a part of duties of husbandmen into a money farm, increase of taxes aggravated their impoverishment even more.

In the 60s–70s of the 19<sup>th</sup> c. a struggle of the leading powers for economic and political dominance in the East, including Persia, intensified. The country that was only a sale market for the developed country transformed gradually into a source of raw material and application of capital. The British, US, Russian and German entrepreneurs got concessions ruinous for Persia from the local government. Thus, in 1872 the head of the telegraph Reuters Agency got concession for construction of the railroad from the Caspian Sea to the Persian Gulf, a priority right to exploit all mineral wealth of Persia for 70 years and other privileges. However, under pressure of the Russian government the Reuters agreement was cancelled. A concurrent subjugation of the country occurred. The newly established Shanghai or Imperial Bank of Persia by the British became a major bank enterprise, which overtook nearly all finances of Persia.

On the threshold of the 19<sup>th</sup>–20<sup>th</sup> c. Persia finally turned into a semi-colony of Britain and Russia. Also, Germany included in struggle for Persia. Its penetration into Persia was directly connected with the construction of the Baghdad Railroad.

Communal, peasant and state lands were overtaken by the feudalists, lords of manor, officials and high clergy. The peasants had to rent land on the oppressive terms giving sometimes to the lord of

manor and state up to 9/10 of their yield. Adapting economy of the country to the demands of the world market, local feudalists replaced cereals with industrial crops, introduced single crop economy (cotton, rice and poppy growing). As a result the food prices grew, and the population was reduced to indigence even more. Due to nearly full lack of its own industry mainly merchant bourgeoisie developed in Iran.

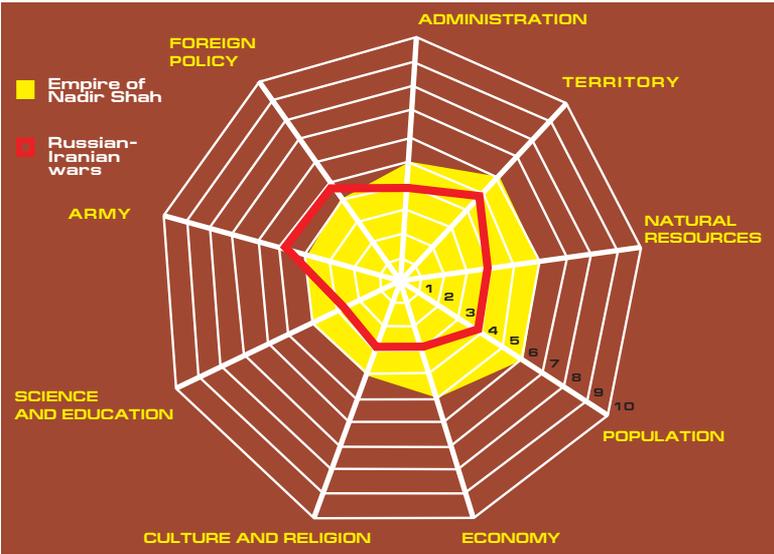
**Culture and religion.** At the end of the 17<sup>th</sup> – beginning of the 18<sup>th</sup> c. as a result of continuous wars, internecine feuds and deep economic devastation the culture of Iran turned out in the state of decline. The development of such genre of literature as the poetical-historical narration at court can be viewed almost an exception. The struggle of the Shiite and Sunni clergy for power in the country became a major motive in the development of religion.

**Science and education.** These spheres of life in the country also suffered. Educational establishment by the mosques – madrasahs – were closed, the number of educated people in Iran dropped sharply.

**Army.** A frequent change of the rulers led to dissolution at one moment or gathering at another of regular army. Iran maintained relatively battleworthy and numerous army (55–60 thous. people) under **Nadir Khan Afshar** (1688–1747). His army comprised regular infantry regiments, cavalry, artillery, and also detachments of mercenaries of the Turkmen, Uzbeks and Afghans. The navy and cannon casting plant were established then.

**Foreign policy.** The invasive aspirations of Persia towards Georgia and other lands of Transcaucasia that comprised a part of Russia and the anti-Russian policy of the British in Persia triggered the Russo-Persian war of 1804–1813. Despite the assistance provided by France and England to Persia, it suffered defeat after defeat. The revolts began in the country. The Russo-Persian War ended with the conclusion of the Gulistan Peace Treaty of 1813, which executed the accidence of the Karabakh, Shirvan, Derbent, Baku, Ganja, Shekin and a number of other khans to Russia as well Dagestan, Georgia, Imeretia, Megrelia and Abkhazia and thus finally liberated them from the Persian yoke. Under the treaty no other power, except Russia, could maintain the navy on the Caspian Sea. However, the Persian rulers instigated by the British did not reconcile with territorial losses. In 1826 Persian again launched military operations against Russia and again lost. Under the Turkmanchay Peace Treaty of 1828 Russia got the Yerevan and Nakhichevan Khanates. Thus, a part

Figure 19.20  
**Persia at the End of the 18<sup>th</sup> — Beginning of the 19<sup>th</sup> c.**



of the Armenian people recovered from the many-century Persian oppression. The Shah undertook to pay 20 mln. roubles of indemnity to Russia, return all prisoners of war and other Russian subjects to their motherland.

In the 1850s the Persian feudalists repeatedly attempted to establish their dominance over the Turkmen tribes. Plunderous inroads into the Turkmen lands did not cease until the Caspian region was made a part of Russia. A strategic matrix of Iran in modern time is given in *fig. 19.20*.

### 19.4.6. Iran during of World Wars I and II

At the beginning of the 20<sup>th</sup> c. a struggle between major powers for economic and political dominance in the East, and specifically in Iran, aggravated even more. The Persian oil assumed prime significance in such struggle.

After the beginning of World War I the Persian government declared its neutrality (November 1914). However, in 1914 the British landed its troops on the coast of the Persian Gulf and on the

Island of Abadan. Entering the war on the German side, Turkey invaded Persian Azerbaijan.

By the beginning of 1917 Persia was fully occupied: in the North – by the Russian troops, in the West to Hamadan – by German-Turkish, and in the South – by English. In Kermanshah the so called provisional government formed by the German occupation authority sat. In Teheran the Shah government under the influence of Britain and tsar Russia was founded. Economy of the country went to decay. Sown areas and livestock population fell sharply, the irrigation system was destructed in many regions, dozens of thousands of husbandmen were ruined.

In 1921 and 1923 in violation of the Soviet-Persian treaty the government of Iran granted the US companies «Standard Oil» and «Sinclair» concession for development of oil in the north of the country. However, both these concessions were canceled after protests of the USSR. Also, the British opposed these concessions who sought to keep the monopoly positions in the British-Persian oil company.

In contrast to them Prime-Minister of the country Kawam, the US placemen, the British staked on military minister Reza Khan. In 1921–1922 he assumed the military command, including gendarmerie and reorganized them into a single army; suppressed the peasants' revolts in Guilan and Khurasan. Strong measures in foreign and internal policy, and also struggle for centralization of power strengthened the authority of Reza Khan in bourgeois circles, which were its social support.

In 1925 the 5<sup>th</sup> Majlis took a resolution on the deposition of the Qajar Dynasty and a transmission of temporal powers to Reza Khan. The Constituent Assembly convoked in the atmosphere of police and military terror proclaimed him the head of Persia under name **Reza Shah Pahlavi**. He established the regime of dictatorship of landowners and bourgeoisie in the country.

For consolidation and protection of landed classes ownership to land Reza Shah enacted a number of laws and regulations comprising registration of estates (1928), leasing out governmental lands (1930) and their sale (1934), criminal code (1927), civil code (1929), laws against forcible seizure of lands (1930) and agrarian banditism.

In the 30s foreign policy of Reza Shah was undisguised anti-Soviet. In 1937 Iran (from 1935 it is an official name of Persia under the resolution of the local government) signed the anti-

Soviet Saadabad Pact of 1937 with Turkey, Iraq and Afghanistan. In 1938 Reza Shah refused to renew a commercial treaty with the USSR, but signed a similar treaty with Hitler Germany. Before World War II 40–45% of all Iranian foreign trade fell to a share of Germany. The Germans monopolized the deliveries to Iran of equipment and weapons, constructed airfields, controlled military factories and other significant enterprises and institutions.

During World War II Iran was turned into the staging area for fascist troops. In the borderline regions of the USSR the armories were made and the armed groups were formed for performing subversive-terrorist acts against the USSR. On August 25, 1941 under Article 6 of the Soviet-Persian treaty of 1921 the Soviet government garrisoned the northern regions of Iran. The British troops entered there at the same time. On September 8, 1941 a treaty was signed between the USSR, Britain and Iran on withdrawal of the Iranian troops from northern and south-northern areas, and also on removal of agents and representatives of Germany and its satellites from Iran. On September, 16 Reza Shah abdicated. On January 29, 1942 the treaty of the union between the USSR, Britain and Iran was signed and executed the stay of the Soviet and British troops on the territory of this country. On September 9, 1943 Iran formally declared war on Germany.

In the declaration adopted on December 1, 1943 at the Teheran conference the leaders of three allied powers (the USSR, USA and Great Britain) restated their intent to render economic assistance to Iran and keep its full independence and territorial integrity.

### **19.4.7. Iran in the Middle and the End of the 20<sup>th</sup> Century**

Identifying features of the contemporary history of Iran include a gradual consolidation of capitalist relations; desire to become a regional leader in the Near East; active impact of Islam on all spheres of governmental activities.

In the second half of the 20<sup>th</sup> c. the industry of the country considerably strengthened, its new, advanced industries appeared featuring metallurgical, petrochemical etc. Using tremendous oil

proceeds Iran transformed from a purely agrarian into agrarian-industrial country. The land reform of 1960–1970 conduced to a fast growth of agricultural production. After a take-over in 1953 Iran refused from the policy of neutrality and elected to be oriented at the West, first of all at the USA.

**Administration.** In the period under study Iran was in an intricate international political situation. From the 1980s after the Shiah upper circles came to power as a result of the revolution of 1977–1979, a well-defined religious hierarchy not inherent to the Islam was established in the country. It got a well-defined religious-legal execution. The dictations of **Ayatollah Khomeini** as the supreme Shiah leader were compulsory for all Shiah, including for the supreme clergy. Under the pressure of Khomeini the Iranian constitution legalized a principle under which spiritual and secular power was demised to the Shiah leader. Furthermore, Khomeini became the Secretary General of the leading political organization – Islamic Republican Party (IRP). The title of the leader of faith got by Khomeini under the constitution was not in line with the Islamic rules. Many imams who objected to such omnipotence were disfavored. The objective underlying the establishment of the Shiah hierarchy was to use all steps for centralization of political power in the hands of clergy.

**Territory.** The territory of today's Iran makes 1645 thous. sq. km. Iran is divided into 10 numbered astans (which mainly coincide with the lands of historical provinces) and 1 special – central – Teheran.

**Natural resources.** Iran is rich in various types of mineral reserves, but they are not prospected enough. The deposits of oil are most significant; Iran occupies the 3<sup>rd</sup>–4<sup>th</sup> place by such reserves and production among oil-producing countries of the region. The deposits of coal, iron, copper and lead and zinc ores are quite numerous as well as silver, gold, antimony, arsenic, molybdenum, nickel and cobalt. Barytes, asbestos, magnesia, graphite, sulphur, corundum and all types of salts are mined here of non-metal minerals.

**Population.** Iran is a multinational state where about 30 nationalities reside. The Persians make more than 60% of population of the country. The Azerbaijani occupy the second place among the nationalities of Iran by their size (about 12.2 mln. people), third place – the Kurds (3.7 mln.). The Moslems

make more than 95% of the population with more than 90% of the Shiah among them.

With the fall of the Shah regime in the Islamic Republic the national minorities expected that they would get the right to free self-determination. However, the reactionary sentiments of the clergy which came to power saturated with the ideas of Pan-Islamism interfered with the settlement of the national issue.

**Economy.** Although the economic base of the state considerably strengthened, its infrastructure developed not without complexities. The level of national well-being fell, the industrial output made less than 40% of pre-revolutionary continuing its fall. An average daily oil production did not exceed 600–800 thous. barrels. Due to a military conflict with Iraq 70% of the oil refinery facilities were put out of commission. An acute shortage of foodstuff was felt. The regime of economic sanctions established by the USA and the leading European powers considerably worsened the situation of Iran.

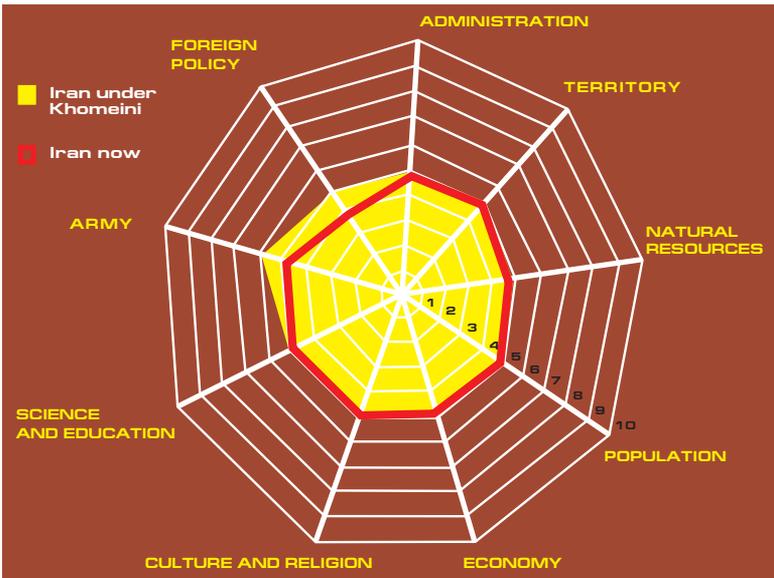
**Culture and religion.** The Shiah leaders acted under the slogan with struggle against westernization negating cultural achievements of the non-Islamic nations. Furthermore, according to the theory of Khomeini, a true Islam is practiced in Iran only; it is distorted in other Moslem countries, and therefore should be called «wrong Islam». Due to such guideline the relations of Iran and many states were seriously worsened.

**Science and education.** By the end of the 20<sup>th</sup> c. a scientific and technical potential of Iran grew considerably. A scientific base was created for the implementation of the economic development programs of the state. The system of school primary education developed inseparably with the religious system of madrasah.

**Army.** Under an acute shortage of modern weapons and combat equipment in the armed forces of the country the major ways for the maintenance of the Iranian army in good military battle readiness were cheeseparing policy, increase of repair facilities of the country and skilful training of the military personnel. The Iranian leadership established all conditions for training the military staff in the country without employment of foreign military practices and specialists. The establishment of the united headquarters of the armed forces in Iran became the result of the reassignment of the branches of the Iranian armed forces and

Figure 19.21

### Strategic Matrix of Iran by the beginning of the 21<sup>st</sup> Century



penetration of the ideologists of the Islamic revolution in all spheres of functioning not only of the armed forces, but the country. Despite considerable superiority manpower of the Iranian army over the armies of Iraq, Egypt and Syria, it was inferior in qualitative and technological aspects.

**Foreign policy.** The strategic objective of the line of foreign policy of the Iranian leadership was to «export Islamic revolution» to other, first of all, Islamic countries. The crisis in the relations with Iraq was the result of such policy and war as its effect. The representatives of Iran asserted that their country waged war not on the people of Iraq, but with the Saddam regime in order to «liberate» the Iraqi people and to establish a true Islamic regime there. Furthermore, Iran sought to strengthen ties with the developed capitalist countries and China. Israel and the USA remained declared enemies for Iran. However, a further initiative of President of Iran Khatami on development of dialogue among civilizations was supported by the UNO which proclaimed the year 2001 the Year of Dialogue among Civilizations. Thus, by the end of the 20<sup>th</sup> – beginning

of the 21<sup>st</sup> c. Iran became rightly one of the leading regional powers of the world (*fig. 19.21*).

#### **19.4.8. Outlooks of Iran for the 21<sup>st</sup> Century**

The Islamic Republic of Iran is one of the largest states on the planet. It occupies a significant military-strategic position at the turn of Asia and Europe, in the immediate proximity to Russia.

Iran influences significantly the development of worldwide socio-political processes, reviving Islamic values by its example and active well-directed activities. Furthermore, as a result of the revolution of 1979 headed by churchmen, it turned into the center for export of ideas of the Islamic revolution, conducted considerably to the outburst of the Islamic fundamentalism worldwide.

A strategic objective of the Iranian leadership is to transform the country into the Moslemwide center of force in future, and in the immediate future – to make it a regional center of force and the leader in political, economic and military spheres in the Near and Middle East.

***System of administration.*** A major line of development of internal political situation and the system of administration in Iran is a symbiosis of religious and secular branches of power. A unique situation has formed in this country when two antagonist forces act in its leadership – the grouping of radical conservators headed by spiritual leader of Iran Ayatollah A. Khomeini and the grouping of radical reformers headed by the president of the country (first by Khatami, and then by M. Ahmadinejad). At the same time the positions of the secular power consolidate from year to year. The pragmatism of its leaders will promote economic and social rise of the country. However, the conservators are still strong and able even to a forcible removal of secular leaders from power.

A successful development of the country by all directions depends on how the relations between secular and spiritual power of Iran will be developing in the near decades. A crisis in this sphere may tell hard on Iran and the region in general.

***Territorial development.*** The contradictions of Iran and Afghanistan and Iraq not still settled with respect to certain territories will not produce any significant influence on the situation in the region. However, in view of foreign policy pur-

sued by the authorities of Teheran for taking the leadership in the region expansion of Iranian territory is not excluded due to Iranian Kurdistan. One more significant task of the government of Iran is a compromise and efficient settlement of the issue pertaining to the division of the bottom and water area of the Caspian Sea among neighboring countries.

**Natural resources.** An economic rise in the country in the foreseeable future will demand to increase significantly the consumption of all types of raw materials and carriers of energy. Oil and gas will remain the base of Iran's economy. It is quite possible that from 2020 differences associated with energy reserves of the country will considerably increase that aggravate the situation in the region. It is anticipated that the Iraqi oil reserves will be spent faster than Iranian.

In the foreseeable future the development of power engineering will become a significant issue. In this field Iran has positive outlooks, especially connected with the building of nuclear reactors.

The problem of supplying with water resources occupies a special place in the country and in general in the region. Iran will retain its leading position in this field by surveying, development and efficient use of groundwater.

**Population.** A relatively fast growth of the population numbers in the country will become a reason for mass unemployment, especially among the youth and as a result of a social discontent that will intensify political struggle in the country. While at the end of the year 2004 73 mln. people lived in Iran, then by 2080 their number will reach already 160 mln. taking into account the existing birthrates. As a result against the background of an aggravating Arabic-Israeli conflict the ranks of extremist Islamic organizations of a various type will be replenished by thousands of young people, many of them with a low cultural level. In order to ease the tension the government of Iran had to take drastic measures to accelerate the development of the economic sector and making new jobs.

**Economy.** The change of economic policy in Iran occurred at the end of the 1990s gave a new impetus to this sphere of activity of the state. The Government put its stakes on the integration into the world economic community counting on getting access to new technologies in future and to speed up the development of the state.

Economy will be still based on production and refinery of carbon raw material, first of all oil, and more than 45% of GDP increase is anticipated to ensure through its production already to 2015. Other sectors of the Iranian industry that will be most developed in future include metallurgical, textile sectors, construction materials and food sectors. An onward development of nuclear power engineering will persist. However, a normal operation of the industry will depend to a great extent on the import of raw materials and equipment in the near 30–50 years. According to experts, the demand in import will be growing and it might make USD 19–23 bln. in 2020.

Agriculture will not be able to ensure the demands of the country in food failing radical solution of an agricultural issue. It should be noted that the country has a positive balance confidently by major indicators of economic development despite all difficulties that Iran has to face. It may be assumed that the economic growth rates will persist in the event of a political stability in the region and Iran.

In the long-term run an economic potential of Iran is more considerable than of many countries of the Middle East.

**Culture and religion.** The dominance of the people with clerical titles who advocate fanatically the interests of religious leaders in many governmental structures will be still determining the development of religion and culture in Iran.

**Science and education.** Despite a scarcity of funds profound attention is given to the development of science, first of all, to the formation and improvement of its material-technical base. The quality of research studies performed, and also training of specialists are high enough and they will be approaching world in the near future by certain directions. There is an apparent tendency towards the creation and implementation of own developments in Iran, which will undoubtedly enhance the level of development of all science in future.

The state program for elimination of illiteracy, according to specialists, will permit to do away with such survival of times to 2035. As of the end of 2003 the country had more than 9 mln. illiterate, and among them 4 mln. people under 40 years old. Positive tendencies will persist in this sphere unless a change in the line of foreign policy occurs under the influence of the Shiah clergy.

**Armed forces.** The armed forces of Iran will remain the largest by their size in the Near and Central East. They possess considerably and relatively fresh experience of combat operations got during the Iran-Iraqi war of 1980–1988. In addition to economic opportunities and national specifics of the country, their construction is based on political and religious objectives of their clerical leadership. Also, it should be taken into account that Iran is actively implementing the program for rearmament and increase in combat capabilities of national armed forces.

The theory of **Khomeini** on the establishment of the world Islamic community – *umma* – still remains officially an ideological base of the military doctrine. However, the Islamic-fundamentalist radical approach to the solution of the national security issues and military construction is being gradually replaced by balanced and moderate.

The construction priorities of the armed forces of Iran remain the perfection of the military-administrative leadership bodies; retrofitting of the army with most advanced types of weapons and military equipment both purchased abroad and manufactured by own defense industry; a qualitative improvement of the system of military personnel training.

In general, the armed forces of Iran will be able to conduct independently combat operations restricted in time and scale in the foreseeable future in terms of their fighting efficiency and combat readiness, level of technology intensiveness, extent of personnel training, military-economic circumstances of the country.

**Foreign policy.** Although modern society becomes more and more clearly aware of the danger of mass dissemination of the ideas of the Islamic fundamentalism, the major long-term objective of the Islamic state, according to the Shiah leadership, is still the establishment of the «world Islamic community» under the aegis of Iran. Its government believes that in the dialog with a view to settle disputable problems between the states it is necessary to rely on force. Hence, the line towards an onward buildup of military strength of the state.

In the near future, along with potential threats to national interests of Russia on the part of Iran common interests will persist (opposition to the American expansion in the region, deterrence of the Turkish influence on the CIS Moslem coun-

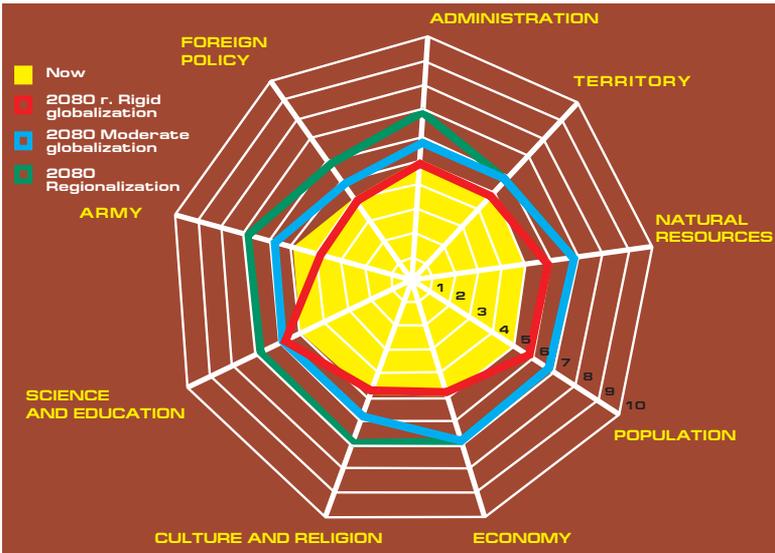
Table 19.4

**Changes in Major Parameters of Iran  
by Indicators of the Strategic Matrix  
(5<sup>th</sup> millennium B.C.— end of the 21<sup>st</sup> c.)**

Event	Date	Indicators of the Strategic Matrix								
		Adminis- tration	Territory	Natural resour- ces	Popula- tion	Economy	Culture and religion	Science and education	Army	Foreign policy
Before the 1 <sup>st</sup> B.C.										
Emergence of tribal unions of Kurdistan and Lunistan	5th millennium B.C.	2	3	4	2	2	1	1	2	2
Emergence of the Achaemenid Kingdom	744 B.C.	3	4	4	3	3	2	2	3	4
Formation of the Achaemenid State	550 B.C.	4	4	5	3	3	2	2	4	4
Formation of the Persian Empire. Cyrus Darius. Xerxes	520–330 B.C.	7	7	6	7	3	4	4	7	7
Disintegration of the Achaemenid Power. Seleucid Period	410 B.C.	5	6	5	5	4	3	3	4	5
1 <sup>st</sup> c. B.C. — 6 <sup>th</sup> c.										
Disintegration of the Seleucid State	114 B.C.	2	2	5	2	1	3	2	2	2
Rise of the Sasanian Kingdom	226–623	5	5	8	4	4	3	4	4	4
Fall of the Sasanian Kingdom	VI s.	3	3	7	3	3	3	4	3	3
Persia in the 6 <sup>th</sup> — 16 <sup>th</sup> c. Arabic Conquest of Persia										
Persia in the Omayyad Caliphate	VI s.	4	3	7	8	3.5	5	2	4	4
Persia as a part of the Sasanian Caliphate	661–750	4	4	6	5	3	4	4	4	3
Persia under the reign of the Abbasids	750–2-я пол. IX s.	5	5	5	5	3	4	5	5	4
Persia under the reign of the Seljuks	1038–1194	3	4	4	4	3	3	3	3	3
Conquest of Persia by the Mongolians	1220–1499	3	5	3	5	4	4	4	4	3
Rise of Persia under the Safavid. Shah Abbas	XVI–XVII ss.	4	6	4	5	5	5	5	4	4
Time of internecine struggle and wars on Turkey	Ср. и кон. XVI s.	3	4	4	4	3	3	3	3	3
1747— to the present day										
Empire of Nadir Shah	1720–1747	5	6	6	6	5	4	4	4	4
Russian-Iranian wars	1804–1824.	4	5	4	4	3	3	3	5	5
Subjugation of Iran by England. bourgeois reforms	1830–1939	3	5	4	4	3	3	3	4	3
Iran under Khomeini	1990	5	5	5	5	5	5	5	6	5
Iran	н. в.	5	5	5	5	5	5	5	5	4
Forecast										
Rigid globalization	2080	5	5	6	6	5	5	6	4	4
Moderate globalizations	2080	6	6	7	7	7	6	6	6	5
Regionalization	2080	7	6	7	7	7	7	7	7	6

Figure 19.22

**Strategic Matrix of Iran at the End of the 21<sup>st</sup> c.**

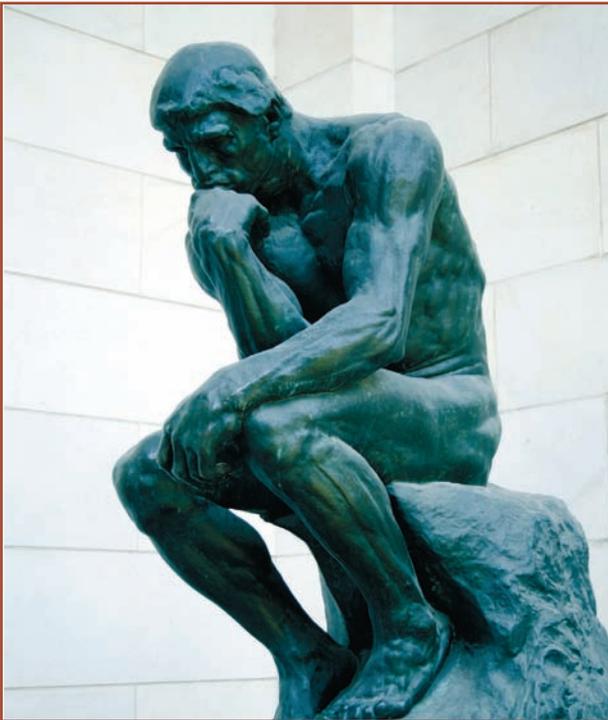


tries, mutually beneficial military-technical and economic cooperation). However, in the long-run future, if Iran is transformed into the regional and the leader for all Moslems, further weakening of Russia, an active ousting from its traditional areas of influence in the Central Asia and Caucasus might begin.

A general strategic matrix of Iran for the outlook to 2080 is shown in *fig. 19.22* and in *table 19.4* (for three scenarios).

**AFTERWORD**

**RHYTHMS OF  
CIVILIZATIONAL  
DYNAMICS**



**O**ur inquiry into the past, present and future of global, world and local civilizations has drawn to a close. Now it is time to look back on the way we've walked, of comprehend the results. It will allow us to reveal the tendencies and regularities of civilizational movement, of pulsation of historic time. We can make certain corrections to the concepts of periodization of historic process prevailing now and possible tendencies for the outlook of the 21<sup>st</sup> century and centuries after it, the process of human development in general and its critical elements in a three-dimensional matrix of cyclical dynamics of different types of civilizations.

In order to summarize the results of our inquiry it is necessary to enunciate the theoretical and methodological approaches and original categories which we use for periodization of macro historic time.

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**T**he starting theoretical base of our approach to periodization of civilizational dynamics is the *cyclical-genetic regularities in the development of society*, whose substantiation can be found in the works of great predecessors who laid the cornerstones of the post-industrial paradigm of social science. There are such scholars as **Nikolai Kondratieff, Pitirim Sorokin, Alexander Bogdanov, Joseph Schumpeter, Arnold Toynbee, Fernand Braudel**, their associates and followers.

This starting point of the inquiry is expressed in the following postulates.

➔ *Dynamics of society is naturally non-uniform.* Cycles of various duration repeat themselves in it – short-term, medium-term, long-term (Kondratieff's), super long-term (civilizational), millenary (historic super cycles). Overlapping each other and interacting these regular objectively determined variations could be seen through the chaos of accidental fluctuations forming an internal logic of historic dynamics.

➔ *Each cycle of each civilization has a specific structure.* They are similar in general features, despite the variety of specific manifestations, phases changing each other – birth, innovative assimilation, spreading (diffusion), maturity and crisis. The latter is inevitable, it indicates that

a given civilization (or the period in its development) has mainly exhausted its resource and time has come of a painful replacement by the next civilization (or a new epoch). Civilizational crises of this or that duration are as inevitable as the twilights at the end of the day or winter in the annual pattern.

➡ ***Civilizational crises and revolutionary changes following them are the manifestations of action of socio-genetic regularities:*** inheritance, variability and selection in the dynamics of society. Inheritance means that a complex genotype of civilization will survive in the change of cycle. This genotype includes six major elements — «social chromosomes»: demographic, ecological, technological, economic, social-political and spiritual. *Variability* helps to enrich the genotype and to dispose it of outdated material, which has served its century, to adapt to radical changes in internal and external conditions of development. *Selection* helps to implement such adaptation, to choose most efficient and beneficial (though sometimes selection turns out to be wrong, generating an anti-innovation) from the thousands of possible variants of dynamics. Selection is performed by people, social movements, states, inter-state organizations and unions — waves of innovations accompany the formation of a new civilizational cycle.

➡ ***We'll take as a starting point, the beginning of the formation of a new cycle the revolutionary period that follows a crisis phase*** (more exactly — beginning at the end of such crisis phase). Crisis is the final stage of a cycle, a new cycle evolves after it.

➡ ***Civilizational space is multilayer and inhomogeneous in its composition.*** Local civilizations emerge and fade away into nothing, leaders of their generations change. Concurrently there exist genotypes of various world civilizations, but one of them — after the end of a transitional period — becomes prevailing, describing the face of a global civilization in a given historic period. Vanguard local civilizations measure the historic time, they are the ones that form the rhythm of civilizational dynamics. It used to be, and it will be.

These are certain criteria and starting postulates that determine our approach to the measurement of the rhythm of civilizational dynamics. They may be disputable, so other approaches and criteria are suggested, but it is important to understand what we are governed by in the measurement of civilizational dynamics — global, world and local.

Let's proceed to the conclusions **on the rhythms of each type of civilizations**, beginning with **cycles in dynamics of a global civilization**.

*The first geocivilizational cycle* embraces the period from the 8<sup>th</sup> c B.C. till the middle of the 1<sup>st</sup> millennium A.D., which is approximately 80–85% of all historical time. We believe that the *Neolithic revolution* preceded by a long crisis period of the Mesolithic is the starting point of its emergence of the whole global civilization, the beginning of the historic process. The Neolithic revolution evolved in the 8–7 millennia B.C. in a relatively narrow strip to the North from the equator where favorable conditions formed for the development of communities and tribes, which had considerably increased in numbers and were armed with throwing tools. However, the destruction rates of the surrounding animals and plants by primitive tribes exceeded the possibilities of natural reproduction; furthermore, the climate conditions also changed. In order to survive people had to start artificial reproduction – growing plants and raising cattle. A decisive step was made towards reducing the dependence on nature, labor efficiency increased many times; the foundations of exchange were laid down. Crafts and construction developed, towns were built («city revolution»). Stratification of communities and community members based on property began (economic stratification). It became the first stage of the *first historic super cycle* in the dynamics of a global civilization (this phase lasted several thousand years more on the periphery of the progress).

The next *early class phase of the first super cycle* began approximately in the middle of the 6<sup>th</sup> millennium B.C. with the emergence of new local civilizations in the valley of the Nile, and then in the basins of other great historic river (Tigris and Euphrates, Indus and Ganges, and a little later – in the Yangtze and the Huang He). The genotype of a global civilization was completed by new elements: classes, states, commodity-money (market) relations, scientific knowledge and religions. Society was formed similar to the present day one in the structure. It was if we use the terminology of **Karl Jaspers**, *the first axial age in the history of civilization*; it could be described as *the phase of spreading (diffusion) of the first global historic super cycle*.

*The next phase was that of its maturity when the civilizations of the ancient society and the second generation of local civilizations prevailed. It lasted from the beginning of the 1<sup>st</sup> millennium B.C. up*

to the 5<sup>th</sup> A.C. — about a thousand and a half years. It reached its apex in the Greek-Roman, Persian, Indian and Chinese civilizations. The first super cycle was completed with the phases of decline in the 2–5<sup>th</sup> c. A.D.

**The second geocivilizational super cycle** goes back to the second half of the first millennium A.C. and covers the period up to the end of the 20<sup>th</sup> c. — about 15 centuries in a total. The formation stage of this super cycle begins in the 6–8<sup>th</sup> c., the stage of diffusion — in the 9–14<sup>th</sup> c., the stage of maturity — 9–19<sup>th</sup> c., the stage of decline falls to the 20<sup>th</sup> c. The second historical super cycle includes the cycles of three world civilizations (medieval, early industrial and industrial) and two generations of local civilizations.

**The third geocivilizational super cycle** has just begun to form. It is happening before our eyes and with our involvement. Therefore it is difficult to characterize it — according to **Sergey Yessenin**, «Face to face, no face could be seen». Nevertheless, let's venture to suggest certain conjectures. If the tendency towards compression of historic time persists, then this super cycle will cover three cycles of world civilizations of 500–600 years long and two-three generations of local civilizations. It is likely to become the period of the maturity of a global civilization. Hence it will be characterized by the growing elements of crisis by the end of the period, increasing in the risk of self-destruction as a result of environmental or technogenic catastrophes, depopulation or clash of civilizations. A more definite picture could be visualized only with respect of the initial stage of the second super cycle — period of an early post industrial civilization. The features of a more distant future are hidden behind a thick curtain of uncertainty.

**The typology of world civilizations** is taking shape more clearly. The first of them is the Neolithic civilization that was the period of the birth of civilization when its pyramid had not formed in full yet (a social-political, state «floor» was missing), the area of spread of civilization was quite narrow and practically no local civilizations existed.

These problems were removed at the next stage, in the period of an **early class civilization** (the end of the 4<sup>th</sup> millennium B.C. — beginning of the 1<sup>st</sup> millennium B.C.). It was then that a social stratification and classes were formed, the state emerged as well as law, market with its main attributes, a train of wars occurred. Religions played a strong role in the life of society (large religious monuments of Egypt, Mesopotamia and India speak about that).

**Ancient civilization** (this name is nominal), chronological framework of which dates back to the beginning of the 1<sup>st</sup> millennium B.C. approx. up to the 5<sup>th</sup> c. A.D. became the third one, replacing the early class civilization. This was the period of flowering of the second generation of local civilizations, diffusion of a civilizational area, formation of the world empires (Persian, Alexander the Great and Roman), the period of flourishing in the spiritual sphere (especially in Ancient Greece). However, by the middle of the 1<sup>st</sup> millennium A.D. the potential of the world civilization was considerably exhausted, the period of its decline and decay began. The crisis gave rise to germination of new monotheistic world religions (Buddhism, Christianity and Islam).

Following the ancient one the **medieval civilization** (this name is nominal) embraces the period from the 6<sup>th</sup> c. A.D. up to the 14<sup>th</sup> c. A.D. — about 9 centuries; at the same time it was the period of the formation of the second geocivilizational super cycle. The picture of the world changed radically. The civilizational belt embraced not only China and India, Near East and Western Europe, but also the Eastern Europe, the present territory of Russia. The Islam diffused rapidly after the Christianity, the Moslem extensive civilization emerged absorbing Egyptian, Persian, a part of Indian and Buddhist civilizations. A train of religious and feudal wars broke out. The sphere of spiritual reproduction was under control of religious institutes. The international trade developed intensively. Economic market mechanisms developed further, and the free cities became their base.

The next civilization that maybe called **early industrial** existed from the 15<sup>th</sup> c. to the last third of the 18<sup>th</sup> c. The era of great geographical discoveries gave rise to it, expanding a geocivilizational geographical range many times. In this period the guild manufacturing was replaced by manufactory, the capitalist mode of production was formed as well as the world market, colonial empires emerged. A social structure of society became more sophisticated too. The bourgeoisie made claims in increasing frequency to political power that resulted in the Netherlandish and English Bourgeois Revolutions. The Renaissance, scientific revolution of the 15<sup>th</sup>—17<sup>th</sup> c., Reformation considerably reduced the influence of religion on people's life, changed its nature, caused the outburst of activity in the spiritual life. However, by the end of the 17<sup>th</sup> c. the enthusiasm for a breakthrough receded in many ways, the signs of a civilizational crisis became increasingly evident.

The industrial revolution of the end of the 18<sup>th</sup> – beginning of the 19<sup>th</sup> gave an impetus to the nascence of the **sixth, industrial civilization** (the last quarter of the 18<sup>th</sup>–end of the 20<sup>th</sup> c.) that spread throughout the world from the epicenter – United Kingdom and Western Europe in general. Then the leadership was taken by North America. «Economization» of society evolved, the huge industrial machine mastered all sides of society's life. The economic growth rates increased many times, the population numbers in Europe increased fast. At the same time the inequality between various social strata and whole civilizations deepened rapidly. The first and second world wars, and also the «Cold War» challenged the very existence of humanity and became the signs indicating that the industrial civilization entered its stage of decline. By the end of the 20<sup>th</sup> c. it became apparent that the industrial civilization is in the state of a deep-seated crisis and doomed to disappear from the historical arena.

The end of the 20<sup>th</sup> c. was marked by the beginning of a transition to the next, seventh, world civilization – **post-industrial**. Many researchers hold the view that this is a *humanistically-noospheric* civilization. Its main content is that in the period of its development both the position of man will change in society (he will not be anymore an adjunct to the machine system, and implement his creative potential in full) and the attitude of society to nature (the formation of noosphere as a rational co-evolution of nature and man occurs). The formation of the third geocivilizational super cycle begins concurrently with the post-industrial civilization, and the fifth generation of local civilizations emerges so the geocivilizational space is radically changing its look. A new society might be called integral as the integral effect of harmony both in it and its relations with nature will be reached, the integral socio-cultural system forecasted by **Pitirim Sorokin** is under way. All these processes develop on the background of globalization, formation of a certain super society maintaining, however, the diversity of civilizations and cultures.

We've outlined an optimistic variant of the development of a new civilization. However, a pessimistic variant is also possible when many contradictions of the former industrial civilization persist, and some intensify. A tragic outcome – self-annihilation of humanity as a result of a clash among civilizations – cannot also be ruled out.

The post-industrial world civilization is likely to embrace the period of two centuries, and the next civilization will come thereafter (within the third geocivilizational super cycle), about which nothing is known so far.

**Generations of local civilizations.** Dynamics of global and world civilizations finds its specific expression in the fate of local civilizations, change of their generations.

The *first generation* formed at the end of the 4th millennium B.C. in the valleys of the great historical rivers — Nile, Tigris, Euphrates, Indus, Ganges, Yangtze and Huang He. The scales of these civilizations were minor from the modern viewpoint, but their contribution is enormous to the development of all humanity. They germinated, reached its bloom and faded away, but their heritage became one of the basic elements in the formation of civilizations of the next generations being born on their ruins. The list of civilizations of the first generation is wide featuring Egyptian and Sumerian, Assyrian and Babylonian, Elamian and Minoan, Indian and Chinese, and also ancient American cultures. The Egyptian civilization was a recognized leader of the first generation with its monuments survived to this day and impressing by their might, variety and beauty.

At the beginning of the 1st millennium B.C. the first generation of local civilizations entered the period of crisis. The time for their *second generation* came (the 8<sup>th</sup> c. B.C. — 5<sup>th</sup> c. A.D.). The leading positions were taken by the Greco-Roman civilization, also the Phoenician and Persian, Indian and Chinese played a noticeable role. The Celtic and Scythian proto-civilizations did not complete its formation. The ancient American civilizations — Aztec, Maya and Incan — reached their summer time (in the later period), but they developed in isolation from the Eurasian center of the civilizational progress.

Unlike A. Toynbee, we distinguish the *third generation of local civilizations* in our treatise, associating it with the period of the medieval world civilization (the 6<sup>th</sup>–14<sup>th</sup> c.). The western European civilizations was in the vanguard of the progress; the leaders included Chinese and Indian civilizations — much bigger in terms of population and economic might, and also the Byzantine civilization, which, however, was fading away during the last several centuries of its life cycle. The Mongolian civilization flared up not for a short time extending its influence on a larger part of the Eurasian territory. The Japanese and Buddhist civilizations strengthened their posi-

tions. In the East of the European continent the Eastern Slavic civilization emerged and reached its summer time in the 11<sup>th</sup>–12<sup>th</sup> c.; then it was thrown back for a long time by the Mongolian invasion.

The period of early industrial and industrial world civilizations coincided in time with the stages of formation, diffusion, maturity and crisis of the **fourth generation of local civilizations** (the 15<sup>th</sup>–20<sup>th</sup> c.). The Western European civilization retained its leadership subjugated Indian, Moslem, African and Chinese. Their revival as independent entities began only in the second half of the 20<sup>th</sup> c. The Eurasian, and then Japanese civilizations withstood the Western European and developed independently.

From the end of the 20<sup>th</sup> c. the formation of the **fifth generation of local civilizations** began. The Western European, Northern American, Latin American, Oceanic civilizations develop vehemently, and the Chinese, Indian and Moslem civilizations revive and conquer their place in the sun. While the Eurasian civilization is passing through a crisis, the African civilization is in the state of a deep crisis.

Apparently, the change of generations of local civilizations, their differentiation will also continue in future. We do not support the position of those scientists who believe that the time of independent civilizations has passed, that they will melt in the unified global super society. Diversity of local civilizations will persist in the unity of the global civilization until humanity exists. And the duty of prime significance of the scientists is to cognize the essence, reveal regularities and contradictions in the development of civilizations, foresee their future, thus arming the billions of the residents on the planet, new generations who will take the baton of a civilizational advance.

The rhythm of the change of world civilizations and generations of local civilizations in a space-temporal dimension is given in the figure at the beginning of the Afterword. This figure characterizes a historical spiral of civilizational dynamics and permits to make several significant theoretical conclusions.

**First**, pulsation of civilizational progress is quickening, **the law of compression of historical time** operates. Life cycles of the first world civilizations and the first generations of local civilizations, initial historical super cycle were many times longer than the life cycles of modern local civilizations and super cycles. It might be anticipated that this law will operate also in future, although the historical time compression rates will somewhat slow down.

**Second**, a *civilizational space is steadily expanding*. At the first stages of the historical advance it occupied only a small area of the oecumene, and man harnessed far from all firm ground. Now the situation has radically changed. By the end of the industrial world civilization and the fourth generation of local civilizations nearly all oecumene is included in the civilizational space; it embraces (although with a various level of population density) nearly all firm land and already goes beyond its boundaries — not only to the World Ocean, but near space. In the outlook for the post-industrial world civilization the population density on the Earth will be only increasing (provided that a challenge of global depopulation can be overcome). Then the humanity will begin to master (at least in terms of science and technology) the middle space — within the solar system.

**Third**, at the first stages of the civilizational advance a considerable *gap in space dimensions of world and local civilizations* was observed. During a long period of the Neolithic civilization, which occupied about a half of historical time, there were no local civilizations, although their predecessors — cultural-historical communities, unions of tribes, leader-based proto-states, and proto-civilizations were formed. At the next two stages of the first historical super cycle the space of the oecumene that was occupied by the early class and ancient world civilizations still remained wider than the space of the local civilizations of the first two generations. Only in the period of the early-industrial and especially industrial world civilizations and the fourth generation of local civilizations this space gap was reduced to minimum, but did not disappear in full. Small spaces where local civilizations interact have still survived and they could not be included in their boundaries with certainty.

**Fourth**, a general tendency is observed (perhaps, it might be interpreted as a regularity of civilizational dynamics), that is *synchronization of the stages of cyclical dynamics in a geocivilizational space*. At the first stages such space gap reached considerable sizes (several millennia) both between the Old and New World, and on the various parts of the African and Eurasian continents. However, due to an intensive interaction among local civilizations, Great Geographic Discoveries and conquest of both Americas and Australia by the European civilization, the synchronization intensified on the scale of all the oecumene. The development of globalization from the end of the industrial period synchronizes the

rhythms of civilizational dynamics in the oecumene to an increasing degree, although, admittedly, it will not entail the disappearance of space-temporal differences in the cyclical dynamics of local civilizations.

The space-temporal measurements of civilizational dynamics are still waiting for their researchers. It is necessary to unite the efforts of the scientists of various specialties — archeologists and historians, economists and sociologists, politologists and culturologists, mathematicians and philosophers — for cognition of tendencies of such dynamics.

## **Supplement 1**

**RESOLUTION  
ADOPTED  
BY THE GENERAL  
ASSEMBLY  
«GLOBAL AGENDA  
FOR DIALOGUE  
AMONG CIVILIZATIONS»**

**THE GENERAL ASSEMBLY,**

*Recalling* its resolutions 53/22 of 4 November 1998, 54/113 of 10 December 1999 and 55/23 of 13 November 2000 entitled «United Nations Year of Dialogue among Civilizations»,

*Reaffirming* the purposes and principles embodied in the Charter of the United Nations, which are, inter alia, to develop friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, to take other appropriate measures to strengthen universal peace, and to achieve international cooperation in solving international problems of an economic, social, cultural or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language or religion,

*Underlining* that all Members have undertaken to refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the purposes of the United Nations,

*Reaffirming* their commitment to the fulfilment of the Universal Declaration of Human Rights as a common standard of achievement for all peoples and all nations and as a source of inspiration for the further promotion and protection of all human rights and fundamental freedoms — political, social, economic, civil and cultural — including the right to development,

*Underlining* that all civilizations celebrate the unity and diversity of humankind and are enriched and have evolved through dialogue with other civilizations and that, despite obstacles of intolerance and aggression, there has been constructive interaction throughout history among various civilizations,

*Emphasizing* that a common humanity unites all civilizations and allows for the celebration of the variegated splendour of the highest attainments of this civilizational diversity, and reaffirming that the civilizational achievements constitute the collective heritage of humankind,

*Recalling* the United Nations Millennium Declaration of 8 September 2002 which considers, inter alia, that tolerance is one of the fundamental values essential to international relations in the 21<sup>st</sup> century and should include the active promotion of a culture of peace and dialogue among civilizations, with human beings respecting one another, in all their diversity of belief, culture and language, neither fearing nor repressing differences within and between societies but cherishing them as a precious asset of humanity,

*Noting* that globalization brings greater interrelatedness among people and increased interaction among cultures and civilizations, and encouraged by the fact that the celebration of the United Nations Year of Dialogue among Civilizations, at the beginning of the 21<sup>st</sup> century, has underscored that globalization is not only an economic, financial and technological process which could offer great benefit but that it also presents the challenge of preserving and celebrating the rich intellectual and cultural diversity of humankind and of civilization,

*Bearing in mind* the valuable contribution that dialogue among civilizations can make to an improved awareness and understanding of the common values shared by all humankind,

*Recognizing* that human rights and fundamental freedoms derive from the dignity and worth inherent in the human person and are thus universal, indivisible, interdependent and interrelated, and that the human person is the central subject of human rights and fundamental freedoms and, consequently, should be the principal beneficiary and should participate actively in the realization of these rights and freedoms,

*Reaffirming* that all peoples have the right of self-determination, by virtue of which they freely determine their political status and freely pursue their economic, social and cultural development,

*Emphasizing* that promotion and protection of freedom of opinion and expression and a collective commitment to listen to and learn from each other and to respect cultural heritage and diversity are essential for dialogue, progress and human advancement,

*Underlining* the fact that tolerance and respect for diversity and universal promotion and protection of human rights are mutually supportive, and recognizing that tolerance and respect for diversity effectively promote and are supported by, inter alia, the empowerment of women,

*Recalling* its resolution 55/254 of 31 May 2001, which calls upon all States to exert their utmost efforts to ensure that religious sites are fully respected and protected,

*Emphasizing* the need to acknowledge and respect the richness of all civilizations and to seek common ground among civilizations in order to address comprehensively common challenges facing humanity,

*Welcoming* the endeavours of Governments, international organizations, civil society organizations and countless individuals to enhance understanding through constructive dialogue among civilizations,

*Welcoming also* the efforts of the Personal Representative of the Secretary-General for the United Nations Year of Dialogue among Civilizations and of the Group of Eminent Persons established by the Secretary-General,

*Expressing its firm determination* to facilitate and promote dialogue among civilizations,

*Proclaims* the Global Agenda for Dialogue among Civilizations.

## **A. Objectives, Principles and Participants**

### **Article 1**

Dialogue among civilizations is a process between and within civilizations, founded on inclusion, and a collective desire to learn, uncover and examine assumptions, unfold shared meaning and core values and integrate multiple perspectives through dialogue.

### **Article 2**

Dialogue among civilizations constitutes a process to attain, inter alia, the following objectives:

➡ promotion of inclusion, equity, equality, justice and tolerance in human interactions;

➡ enhancement of mutual understanding and respect through interaction among civilizations;

➡ mutual enrichment and advancement of knowledge and appreciation of the richness and wisdom found in all civilizations;

➡ identification and promotion of common ground among civilizations in order to address common challenges threatening shared values, universal human rights and achievements of human society in various fields;

➡ promotion and protection of all human rights and fundamental freedoms and enrichment of common understanding of human rights;

➡ development of a better understanding of common ethical standards and universal human values;

➡ enhancement of respect for cultural diversity and cultural heritage.

### **Article 3**

Pursuit of the above-mentioned objectives will be enhanced by collective commitment to the following principles:

➡ faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small;

➡ fulfilment in good faith of the obligations under the Charter of the United Nations and the Universal Declaration of Human Rights;

➡ respect for fundamental principles of justice and international law;

➡ recognition of diversified sources of knowledge and cultural diversity as fundamental features of human society and as indispensable and cherished assets for the advancement and material and spiritual welfare of humanity at large;

➡ recognition of the right of members of all civilizations to preserve and develop their cultural heritage within their own societies;

➡ commitment to inclusion, cooperation and the search for understanding as the mechanisms for the promotion of common values;

➡ enhancement of participation by all individuals, peoples and nations in local, national and international decision-making processes.

#### **Article 4**

Dialogue among civilizations provides important contributions to progress in the following areas:

➡ promotion of confidence-building at local, national, regional and international levels;

➡ enhancing mutual understanding and knowledge among different social groups, cultures and civilizations in various areas, including culture, religion, education, information, science and technology;

➡ addressing threats to peace and security;

➡ promotion and protection of human rights;

➡ elaboration of common ethical standards.

#### **Article 5**

Participation in dialogue among civilizations shall be global in scope and shall be open to all, including:

➡ people from all civilizations;

➡ scholars, thinkers, intellectuals, writers, scientists, people of arts, culture and media and the youth, who play an instrumental role in initiation and sustainment of dialogue among civilizations;

➡ individuals from civil society and representatives of non-governmental organizations, as instrumental partners in promoting dialogue among civilizations.

### **Article 6**

Governments shall promote, encourage and facilitate dialogue among civilizations.

### **Article 7**

Regional and international organizations should take appropriate steps and initiatives to promote, facilitate and sustain dialogue among civilizations.

### **Article 8**

The media has an indispensable and instrumental role in the promotion of dialogue among civilizations and in the fostering of greater understanding among various civilizations and cultures.

### **Article 9**

The United Nations should continue to promote and strengthen the culture of dialogue among civilizations.

## **B. Programme of Action**

1. States, the United Nations system and other international and regional organizations and civil society, including non-governmental organizations, are invited to consider the following as a means of promoting dialogue among civilizations in all domains, within existing resources and also drawing upon voluntary contributions:

➡ facilitating and encouraging interaction and exchange among all individuals, inter alia, intellectuals, thinkers and artists of various societies and civilizations;

➡ promoting of mutual visits and meetings of experts in various fields from different civilizations, cultures and backgrounds, which provide an opportunity for discovering commonalities among various civilizations and cultures;

➡ exchange of visits among representatives of the arts and culture and the organization of cultural festivals through which people will have a chance of getting acquainted with other cultures;

➡ sponsorship of conferences, symposiums and workshops to enhance mutual understanding, tolerance and dialogue among civilizations;

➡ planning sports competitions, Olympiads and scientific competitions, with a view to encouraging positive interaction among youth from different backgrounds and cultures;

➡ reinvigorating and encouraging translation and dissemination of basic manuscripts and books and studies representing different cultures and civilizations;

➡ promotion of historical and cultural tourism;

➡ incorporation of programmes to study various cultures and civilizations in educational curriculums, including the teaching of languages, history and socio-political thoughts of various civilizations, as well as the exchange of knowledge, information and scholarship among academia;

➡ advancement of research and scholarship to achieve an objective understanding of the characteristics of each civilization and the differences, as well as ways and means to enhance constructive interaction and understanding among them;

➡ utilization of communication technologies, including audio, video, printed press, multimedia and the Internet, to disseminate the message of dialogue and understanding throughout the globe and depict and publicize historical instances of constructive interaction among different civilizations;

➡ provision of equitable opportunities for participation in the dissemination of information, with a view to achieving an objective understanding of all civilizations and enhancing constructive interaction and cooperative engagement among civilizations;

➡ implementation of programmes to enhance the spirit of dialogue, understanding and rejection of intolerance, violence and racism among people, particularly the youth;

➡ utilizing the existence of migrants in various societies in bridging the gap of understanding between cultures;

➡ consultation to articulate effective mechanisms to protect the rights of all people to maintain their cultural identity, while facilitating their integration into their social environment.

2. States should encourage and support initiatives taken by civil society and non-governmental organizations for the promotion of dialogue among civilizations.

3. States, international and regional organizations and civil society, including non-governmental organizations, are invited to develop appropriate ways and means at the local, national, regional and international levels to further promote dialogue and mutual understanding among civilizations, and to report their activities to the Secretary-General of the United Nations.

4. Governments, funding institutions, civil society organizations and the private sector are invited to mobilize the necessary resources

to promote dialogue among civilizations, including by contributing to the Trust Fund established by the Secretary-General in 1999 for that purpose.

5. The United Nations system, including, in particular, the Personal Representative of the Secretary-General for the United Nations Year of Dialogue among Civilizations and the United Nations Educational, Scientific and Cultural Organization, are invited to continue to encourage and facilitate dialogue among civilizations and formulate ways and means to promote dialogue among civilizations in the activities of the United Nations in various fields.

6. The Secretary-General is requested to report to the General Assembly at its 60<sup>th</sup> session on the implementation of this Global Agenda and Programme of Action.

*43<sup>rd</sup> plenary meeting  
9 November 2001*

## **Supplement 2**

# **UNESCO UNIVERSAL DECLARATION IN CULTURAL DIVERSITY**

### **THE GENERAL CONFERENCE,**

*Committed* to the full implementation of the human rights and fundamental freedoms proclaimed in the Universal Declaration of Human Rights and other universally recognized legal instruments, such as the two International Covenants of 1966 relating respectively to civil and political rights and to economic, social and cultural rights,

*Recalling* that the Preamble to the Constitution of UNESCO affirms «that the wide diffusion of culture, and the education of humanity for justice and liberty and peace are indispensable to the dignity of man and constitute a sacred duty which all the nations must fulfil in a spirit of mutual assistance and concern»,

*Further* recalling Article I of the Constitution, which assigns to UNESCO among other purposes that of recommending «such international agreements as may be necessary to promote the free flow of ideas by word and image»,

*Referring* to the provisions relating to cultural diversity and the exercise of cultural rights in the international instruments enacted by UNESCO,<sup>1</sup>

*Reaffirming* that culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs,<sup>2</sup>

*Noting* that culture is at the heart of contemporary debates about identity, social cohesion, and the development of a knowledge-based economy,

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<sup>1</sup> Among which, in particular, the Florence Agreement of 1950 and its Nairobi Protocol of 1976, the Universal Copyright Convention of 1952, the Declaration of the Principles of International Cultural Cooperation of 1966, the Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property of 1970, the Convention for the Protection of the World Cultural and Natural Heritage of 1972, the Declaration on Race and Racial Prejudice of 1978, the Recommendation concerning the Status of the Artist of 1980, and the Recommendation on Safeguarding Traditional Culture and Folklore of 1989.

<sup>2</sup> This definition is in line with the conclusions of the World Conference on Cultural Policies (MONDIACULT, Mexico City, 1982), of the World Commission on Culture and Development (Our Creative Diversity, 1995), and of the Intergovernmental Conference on Cultural Policies for Development (Stockholm, 1998).

*Affirming* that respect for the diversity of cultures, tolerance, dialogue and cooperation, in a climate of mutual trust and understanding are among the best guarantees of international peace and security,

*Aspiring* to greater solidarity on the basis of recognition of cultural diversity, of awareness of the unity of humankind, and of the development of intercultural exchanges,

*Considering* that the process of globalization, facilitated by the rapid development of new information and communication technologies, though representing a challenge for cultural diversity, creates the conditions for renewed dialogue among cultures and civilizations.

*Aware* of the specific mandate which has been entrusted to UNESCO, within the United Nations system, to ensure the preservation and promotion of the fruitful diversity of cultures,

*Proclaims* the following principles and adopts the present Declaration.

## **IDENTITY, DIVERSITY AND PLURALISM**

### ***ARTICLE 1***

#### ***Cultural diversity: the common heritage of humanity***

Culture takes diverse forms across time and space. This diversity is embodied in the uniqueness and plurality of the identities of the groups and societies making up humankind. As a source of exchange, innovation and creativity, cultural diversity is as necessary for humankind as biodiversity is for nature. In this sense, it is the common heritage of humanity and should be recognized and affirmed for the benefit of present and future generations.

### ***ARTICLE 2***

#### ***From cultural diversity to cultural pluralism***

In our increasingly diverse societies, it is essential to ensure harmonious interaction among people and groups with plural, varied and dynamic cultural identities as well as their willingness to live together. Policies for the inclusion and participation of all citizens are guarantees of social cohesion, the vitality of civil society and peace.

Thus defined, cultural pluralism gives policy expression to the reality of cultural diversity. Indissociable from a democratic framework, cultural pluralism is conducive to cultural exchange and to the flourishing of creative capacities that sustain public life.

**ARTICLE 3**

***Cultural diversity as a factor in development***

Cultural diversity widens the range of options open to everyone; it is one of the roots of development, understood not simply in terms of economic growth, but also as a means to achieve a more satisfactory intellectual, emotional, moral and spiritual existence.

**CULTURAL DIVERSITY AND HUMAN RIGHTS**

**ARTICLE 4**

***Human rights as guarantees of cultural diversity***

The defence of cultural diversity is an ethical imperative, inseparable from respect for human dignity. It implies a commitment to human rights and fundamental freedoms, in particular the rights of persons belonging to minorities and those of indigenous peoples. No one may invoke cultural diversity to infringe upon human rights guaranteed by international law, nor to limit their scope.

**ARTICLE 5**

***Cultural rights as an enabling environment for cultural diversity***

Cultural rights are an integral part of human rights, which are universal, indivisible and interdependent. The flourishing of creative diversity requires the full implementation of cultural rights as defined in Article 27 of the Universal Declaration of Human Rights and in Articles 13 and 15 of the International Covenant on Economic, Social and Cultural Rights. All persons have therefore the right to express themselves and to create and disseminate their work in the language of their choice, and particularly in their mother tongue; all persons are entitled to quality education and training that fully respect their cultural identity; and all persons have the right to participate in the cultural life of their choice and conduct their own cultural practices, subject to respect for human rights and fundamental freedoms.

**ARTICLE 6**

***Towards access for all to cultural diversity***

While ensuring the free flow of ideas by word and image care should be exercised that all cultures can express themselves and make themselves known.

Freedom of expression, media pluralism, multilingualism, equal access to art and to scientific and technological knowledge, including in digital form, and the possibility for all cultures to have access to the means of expression and dissemination are the guarantees of cultural diversity.

**CULTURAL DIVERSITY AND CREATIVITY**

**ARTICLE 7**

***Cultural heritage as the wellspring of creativity***

Creation draws on the roots of cultural tradition, but flourishes in contact with other cultures. For this reason, heritage in all its forms must be preserved, enhanced and handed on to future generations as a record of human experience and aspirations, so as to foster creativity in all its diversity and to inspire genuine dialogue among cultures.

**ARTICLE 8**

***Cultural goods and services: commodities of a unique kind***

In the face of present-day economic and technological change, opening up vast prospects for creation and innovation, particular attention must be paid to the diversity of the supply of creative work, to due recognition of the rights of authors and artists and to the specificity of cultural goods and services which, as vectors of identity, values and meaning, must not be treated as mere commodities or consumer goods.

**ARTICLE 9**

***Cultural policies as catalysts of creativity***

While ensuring the free circulation of ideas and works, cultural policies must create conditions conducive to the production and dissemination of diversified cultural goods and services through cultural industries that have the means to assert themselves at the local and global level. It is for each State, with due regard to its international obligations, to define its cultural policy and to implement it through

the means it considers fit, whether by operational support or appropriate regulations.

## **CULTURAL DIVERSITY AND INTERNATIONAL SOLIDARITY**

### **ARTICLE 10**

#### ***Strengthening capacities for creation and dissemination worldwide***

In the face of current imbalances in flows and exchanges of cultural goods and services at the global level, it is necessary to reinforce international cooperation and solidarity aimed at enabling all countries, especially developing countries and countries in transition, to establish cultural industries that are viable and competitive at national and international level.

### **ARTICLE 11**

#### ***Building partnerships between the public sector, the private sector and civil society***

Market forces alone cannot guarantee the preservation and promotion of cultural diversity, which is the key to sustainable human development. From this perspective, the pre-eminence of public policy, in partnership with the private sector and civil society, must be reaffirmed.

### **ARTICLE 12**

#### ***The role of UNESCO***

UNESCO, by virtue of its mandate and functions, has the responsibility to:

(a) promote the incorporation of the principles set out in the present Declaration into the development strategies drawn up within the various intergovernmental bodies;

(b) serve as a reference point and a forum where States, international governmental and non-governmental organizations, civil society and the private sector may join together in elaborating concepts, objectives and policies in favour of cultural diversity;

(c) pursue its activities in standard-setting, awarenessraising and capacity-building in the areas related to the present Declaration within its fields of competence;

(d) facilitate the implementation of the Action Plan.

## **Supplement 3**

# **CONCEPT OF SUSTAINABLE DEVELOPMENT AND SOLUTION OF GLOBAL PROBLEMS ON THE BASIS OF DIALOGUE AND PARTNERSHIP OF CIVILIZATIONS<sup>1</sup>**

## 1. Challenge of Globalization and the Axial Problem for the 21<sup>st</sup> Century

1.1. On the threshold of the centuries and millenniums a swiftly developing *process of globalization* has become the principal trend for the whole world. Its impartial basis – technological overturn, information revolution and creation of a world net of communications and the Internet, intensification of migration streams between countries and civilizations, forming of the world financial centers and global overflow of financial resources, transfer of focus in acceptance of global economical decision making to a level of transnational corporations (TNC).

1.2. Globalization opens new opportunities before the mankind on its paths to humanistic and noospheric post-industrial society, prospects of prosperity of each nation and civilization on the basis of effective utilization of achievements of human intellect and rational world structure. Nevertheless *contradictions and risks of globalization* became more and more tangible. A contradiction between opportunities of globalization and archaic model of the world community's association, which is unable to solve new global issues, becomes stronger. A gap between rich and poor nations and civilizations in a level of technological and economical development, and quality of life is growing. Stocks of mineral and wood resources are injuriously exhaust, the environmental pollution grows, the hazard of irreversible climatic changes increases. A sequence of local conflicts between civilizations is observed. A potential threat of suicidal clash of civilizations, the majority of which owns modern weapon of mass destruction, remains. The civilization's self-identification of young generations and variety of national cultures is to be lost by a flow of a unified mass culture. All these processes call anxiety and resistance of more and more wide strata of the population and public movements in many countries. A problem of conscious

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<sup>1</sup> Adopted by IV International Kondratieff conference «Dialogue and Interaction of the East and West Civilizations: alternatives on XXI century» (Moscow, May 2002)  
Yakovets Yu.V., Dr. Sc. (Economics), Professor, Academician of the Russian Academy of Natural Sciences

selection of efficient model of the world structure, responding to the 21<sup>st</sup> century realities, which can not only secure survival of the mankind but also transfer to a new stage of development of the global civilization while conservation of local civilizations and variety of cultures is arisen.

1.3. Every historical epoch enjoys its own problem which represents a major antagonism of the epoch. For the first half of the 20<sup>th</sup> century such an axial problem was *the confrontation of the two global systems* which was nigh to result into fire of a nuclear war. In the second half of the 21<sup>th</sup> century it is the inter-action of civilizations of the fourth generation that comes out as an axial problem against the background of accelerated globalization and formation (through a row of crises) of post-industrial society. The future of making, its destiny depend on what exactly a solution will be offered to this problem.

After the «Cold War» was over, and as world socialism system and the USSR ceased to exist, the gravitational axis of world edifice has shifted towards relationship between the civilizations. Since the late 20<sup>th</sup> century humankind's axial problem has been suicidal clash or partnership and dialogue of civilizations.

Two alternative conceptions are now in the foreground to suggest a scenario for the interaction of civilizations during the 21<sup>th</sup> century.

The first scenario holds it that confrontation, collision and clash of civilizations can't be avoided. Starting from local scales they will then extend to the whole globe. Inter-civilization conflicts, including warfare, break out unceasingly at various places on the planet. If not settled down in a due time, the conflicts can very well grow into a lethal civilization clash since many civilizations have obtained nuclear weapon and means of delivery.

An alternative opposed to this awesome scenario is dialogue and partnership among civilizations as the way to handle global issues of the 21<sup>th</sup> century.

1.4. *Dialogue among civilizations*, as well as economic and cultural exchange between them, has been in the existence for five millennia: in fact ever since local civilizations came into being. More intense and extensive in each new epoch than in a previous one, it however alternated with inter-civilization and inter-state wars and confrontations.

At the verge of the 21<sup>st</sup> century dialogue of civilizations, as a starting point and premise of civilizational diverse co-operation and partnership, comes to the foreground and gains new content and significance.

No other solution than one based on dialogue, partnership and cooperation of civilizations can be suggested to meet key global challenges of the 21<sup>st</sup> century such as:

➡ demographic explosion which is still on in the poorest civilizations, together with the tendency to de-population in the West-European, Japanese, and Russian civilizations;

➡ threatening pace of the exhaustion of natural resource and contamination of environment;

➡ gaping gulf in technology and economy that separates a minority prosperous countries and civilizations from the poorest majority;

➡ elimination of threat of a suicidal civilization clash, still pending now together with formation of a multi-polar world on the basis of dialogue partnership of civilization;

➡ preservation and enrichment of socio-cultural diversity of civilizations and nations; breaking tendencies to global unification; eliminating threat to the moral fundamentals of humanity.

Mutual understanding free of intolerance, violence and conflicts is something to result only from inter-civilization dialogue, meaning more than just contacts between states, but an interaction among ethnicities, dozens of millions of families.

Dialogue, interaction and mutual understanding among civilizations, being instrumental in preventing inter-civilization collisions and wars, is the only way for mankind to face up to the growing threat of terrorism, which is alien to the fundamentals of all civilizations, cultures, and religions.

It is not accident that problems of globalization and inter-action of civilizations, prevention of its suicidal clash, and settlement of local inter-civilizational conflicts catch a keen attention on the part of scientists and the whole community, provoking a wave of public discussion. The UNO proclaimed 2001 to be the Year of Dialogue among Civilizations.

On November 8–9, 2001 the UN General Assembly discussed the paper presented by Secretary-General of the UN Kofi Annan at plenary meetings of the 56<sup>th</sup> session. It then passed the resolution Global Agenda for Dialogue among Civilizations. In this

resolution is noting «that globalization brings greater interrelatedness among people and increased interaction among cultures and civilizations, and encouraged by the fact that the celebration of the United Nations Year of Dialogue among Civilizations, at the beginning of the 21<sup>st</sup> century, has underscored that globalization is not only an economic, financial and technological process which could offer great benefit but that it also presents the challenge of preserving and celebrating the rich intellectual and cultural diversity of humankind and of civilization».

1.5. The arguments in favor of scenario of partnership of civilizations was set by the 10<sup>th</sup> Interdisciplinary Discussion «Local Civilizations in the 21<sup>st</sup> Century: Clash or Partnership?» held in Kostroma (Russia) on May 1998, by the 4<sup>th</sup> International Kondratieff Conference «Dialogue and Interaction of the Civilizations of East and West: the Alternative for the 21<sup>st</sup> Century» (Moscow, May 2001) and in monographs Yu.V. Yakovets: «The History of Civilizations» (Moscow, 1997), «The Past and Future of Civilizations» (N.Y., 2000) and the «Globalization and Interaction of Civilizations» (Moscow, 2001). The 4<sup>th</sup> International Kondratieff Conference approved the «Concept of Formation of the Multipolar World on the Basis of Dialogue and Partnership of Civilizations».

## **2. Solution of Key Global Problems of the 21<sup>st</sup> Century on the Basis of Multipolar World Structure and Partnership of Civilizations**

2.1. Interdependence of countries in solving key problems of transnational character will increase with development of globalization; joint efforts on the basis of cooperation and partnership of countries and civilizations for solving key global problems, on which the future of all mankind depends, are required. These problems are referred to six spheres: demographic, ecological, technological, geoeconomical, geopolitical, social and cultural. The posing and solution of these problems will allow to fill with the concrete contents the sustainable development and dialogue and partnership of civilizations.

2.2. The basic global contradiction of the first century in **demographic** sphere is a rapid growth of the some countries' and civilizations' population (crisis of over-population) and decrease of number and aging of population (crisis of de-population) of the others. According to the UN forecast (middle version), by 2050 in comparison with 1998 population of the African, Moslem, Latin American, Hindu, Confucian, Buddhist and Pacific civilizations will be augmented on 3044 million persons or on 62,7%. At the same time population of the Western Christian (without USA), Orthodox and Japanese civilizations will be reduced by 900 million persons or on 15%. Rapid growth of population urges to search territories and sources of existence for new generations, increases tension between nations and civilizations, leads to a rising flows of migrants, becomes a source of conflicts, specially at centers of over-population (for example, on a Hindustan peninsula).

On the basis of deep analysis of demographic and migration processes it is necessary to work out long-term global differentiated demographic policy, which would promote solution of overpopulation and depopulation crises, arrange migration flows between countries and civilizations. At the same time methods of violence, enforcement, orientation on the concept of «the gold billion» are intolerable. Reduction of rates of growth of the world's population, its stabilization by the end of the 21<sup>st</sup> century, rapprochement of the population's dynamics in different countries and civilizations should be a result of this coordinated policy and undertaken coordinated efforts for its realization.

2.3. The most acute global problems of the 21<sup>st</sup> century in **ecological sphere** are:

➡ growth of a demographic burden on natural resources and environment;

➡ exhaustion by middle of the century of a number of mineral raw and fuel, limitation of space of rich wood massifs and fertile grounds;

➡ increase of environmental degradation, specially in densely populated areas, growth of number of natural and technogenic accidents, irreversible climatic mutations in the Earth;

➡ damages to the environment by military conflicts.

These problems can't be resolved within the framework of individual countries and civilizations, need the elaboration and consec-

utive realization of the global long-term natural and ecological program envisioning:

➡ joint development, mastering and rapid expanding of principally new resource-saving technologies, providing displacement for natural sources of raw and exhaustible power supplies; assistance to more poor countries and civilizations in development of these technologies;

➡ creation of global monitoring on reserves and transfer of natural resources and pollution of the environment;

➡ conduction of joint efforts on complex use of natural resources and limitation of the environmental pollution;

➡ creation of economical and legal mechanism of realization of global natural and ecological program by allocation of part of the global natural rent and ecological anti-rent, forming of global ecological law and rules of its observance.

These problems can be solved only on the basis of dialogue, cooperation and partnership of civilizations.

2.4. The central global *technological* problem is limiting the increased gap in levels of technological development of different countries and civilizations under conditions of widespread expansion of the fifth technological structure in the developed countries, preparation and mastering in future of the sixth structure, which will determine competitive strength of production and technology in the second quarter of the 21<sup>st</sup> century.

This problem can be solved on the basis of cooperation and partnership of the countries and civilizations by a way of:

➡ consolidation of scientific forces and investments for study and development of the sixth technological structure;

➡ creating conditions for the accelerated spreading of progressive scientific and technological achievements in all countries and civilizations;

➡ development and realization of global programs on supply of the less developed countries and civilizations by the foodstuffs, power resources and materials on the basis of development and spreading the fifth and then the sixth structures;

➡ transfer of technical assistance of the international financial organizations and the developed countries on support of technological development of the less developed civilizations; and for that creation of a global fund at the expense of technological quasi-rent and fees of the developed countries;

➡ rendering assistance to the less developed countries and civilizations in training scientific and technical specialists for development and exploitation of new technologies; establishment of compensation's system for expenditures on professional training in case of high proficiency's specialists migration.

2.5. The major **geoeconomical** problem of the 21<sup>st</sup> century is a rising gap between rich and poor countries and civilizations as a result of practically uncontrolled activity of TNC, financial gambles and technological backwardness of certain countries. According to the World Bank's information, in 1999 a gap in a level of average Gross national income per capita between the countries with high level-of (960 million persons) and low level of the incomes (2050 million persons) has reached 74 times. Hundred of millions individuals are on an edge of poverty, millions annually die of starvation.

Global problem of poverty and backwardness can be solved only on the basis of dialogue and partnership of civilizations. It is necessary to study carefully and to utilize experience of the new industrial countries, China, India on overcoming economical and technological backwardness, to work out a concept and a long-term global program of overcoming poverty and backwardness, to accept this concept at the world conference within the UN frameworks. Creation of civilization and global funds for realization of this program is required at the expense of establishing international control behind the TNC's activity, transfer for these purposes of part of the global natural rent and technological quasi-rent as well as financial means, allocated by the developed countries for economical and technical assistance to the poor countries. Tangible progress in solving the global problem of poverty and backwardness should be reached by first decades of the 21<sup>st</sup> century.

2.6. The key global problems subject to a solution at the 21<sup>st</sup> century in **geopolitical** sphere are:

➡ reducing threat of wars between civilizations and countries and armed conflicts and international terrorism, elaborating mechanism of prevention and solution of conflicts on the basis of the conventional legal rules and international peace-keeping forces within the UN frameworks, imposition of obligation to compensate damages, caused by the conflict, on the aggressive side;

➡ reducing expenditures on military purposes, demilitarization of economy, transfer of a part of released means on the global

program of overcoming poverty and backwardness and on prevention of conflicts;

➡ legal limitations of international trade of the modern weapons; conclusion of global agreements on prohibition of development and use, stage-by-stage reduction and demolition of the weapon of mass distraction under the international control;

➡ refusal for creation of new military blocs between nations and civilizations, disbandment or transformation of the existing military and political blocks and organizations;

➡ surmounting the trends of totalitarianism, of person's suppression in certain countries and civilizations, spreading ideas of cultural peace and nonviolence; acceptance of the UN Declaration of rights and responsibilities of the citizen and the state.

Urgent task of the first decades of the 21<sup>st</sup> century is creation of new world structure, basing on cooperation and partnership between nations and civilizations and providing delivery to civilization's and global organs a part of functions on keeping international peace and security, prevention and solution of conflicts and clashes between countries and civilizations.

2.7. The 21<sup>st</sup> century is characterized by the trend of forming **integral social and cultural system**, which will become foundation of dialogue and partnership of the civilizations, spiritual revival of the mankind on the basis of humanistic ideas, developing creative capacities of each individual, nationality, people, and of each civilization.

Major global problems, which are to be solved on this path, are as follows:

➡ Preservation, development and enrichment of **variety of cultures** accumulated by centuries and millenniums of the world cultural heritage. It is necessary to finish and to accept within the frameworks of the UNESCO and the UNO an international treaty on preservation of the world cultural heritage by developing ideas of the Rerich's Pact of Peace. It is necessary to apply strict international sanctions to the states destroying cultural and historical monuments or inflicting injuries on them. The Internet and the telecommunications, international tourism should serve the purposes and transmission of ideas of variety of cultures, international cultural exchange, preservation of ethnic, cultural and civilization's traditions to the next generations. It is necessary to promote conservation of a cultural originality of migrants, their language and customs under conditions of expanding migrations between civilizations.

➡ Creating conditions for free **scientific creativity** in all countries and civilizations, expansion of new scientific ideas, discoveries and inventions, forming post-industrial scientific paradigm, adequate to realities of the 21<sup>st</sup> century. Acceptance and development of the internationally recognized norms, providing freedom of scientific creativity, protection of intellectual property and rapid distribution of scientific achievements, being universal property. Forming Internet portal of one the World Scientific heritage. Development of scientific exchanges between countries and civilizations, creation under aegis of the UNO and the UNESCO of international scientific teams for development of concepts for solving key global problems. Development by the UNESCO and acceptance by the UNO of a convention on freedom of scientific creativity and international scientific exchanges, providing conditions for development of scientific potential in all countries and civilizations.

➡ Development of system of **continuous education** and remote study around the world, distribution of ideas and methods of creative pedagogy, providing development of capacities and skills of each person. Working out and realization of the global program of overcoming illiteracy, development of general and professional education and rendering assistance in it to the less developed countries and civilizations (according to the UNESCO information in 2000 number of illiterate in the world was 881 million peoples, from that number 870 million persons lived in the developing countries; in the least developed countries percentage of illiterate was 47,3 %). It would've been necessary to create the global body of the teachers who are carrying out this program in the left behind countries and civilizations, to multiply number of educational TV programs and educational sites in the Internet, to render international assistance in publishing modern textbooks in different languages of the world, to develop cooperation in education of pupils, students and teachers from such countries and civilizations.

➡ Severe threat to the future of the mankind is introduced by negative processes in the field of **ethics**: undermining of forming for centuries systems of national and civilization's moral values, stability of family, expansion of drug abuse and criminality, pornography and prostitution, nationalism and chauvinism, wave of violence and erotic on television and sites of the Internet. It is necessary to break this dangerous trend, create conditions for distribution of humanis-

tic ethics on the basis of dialogue and partnership of civilizations and countries. It is necessary to elaborate under support of the UNESCO a humanism charter of mass media and Internet, which should be opened for signing by mass media, Publishing houses and the Internet companies, to organize public control of its observance. It is necessary to pay more attention to education of humanistic morals within family and school, to similarity of ethical grounds of different peoples and civilizations.

➡ The most important role in development of the spiritual world of peoples and civilizations belongs to *religions*. The majority of the mankind is under influence of the basic world religions: in 2000 33% of the world's population professes the Christian religion, 20% — Islam, 15% — Hinduism, 6% — Buddhism; the religions are one of distinctive features of local civilizations. A duty of the religious representatives and organizations is to preach ideas of good, love and peace, to appear against violence and religious extremism. It is necessary to support and realize measures on liquidation of all kinds of religious intolerance outlined by the UN General Assembly resolution of March 1, 2001, to organize the world meeting of representatives of all religious confessions under aegis of the UNO and the UNESCO to develop coordinated program of actions in the field of education and distribution of humanistic values and dialogue between civilizations.

Arrangement of dialogue between cultures requires development distribution of principles and programs contributing to mutual acquaintance and mutual understanding of different cultures representatives. It presumes creation of certain multi-cultural environment, in which place and attention to each cultural group is provided. At the same time, a dialogue cannot be limited by incorporation of all subjects of relations. Non-function of common language confines opportunities to discuss even the most fundamental problems of the modern complex world. That is why it seems necessary to develop new paradigm of universal spirituality, in which not only past achievements of the global civilizations should be considered, but also new high principles of understanding of general purposes and tasks of the mankind, interdependence of all peoples of the world and common prospects of their development are presented. Formation of such system of spirituality should become the urgent task of humanitarian and social sciences.

### 3. Mechanism of Realization of the Dialogue and Partnership of Civilizations

3.1. Formation of *global civil society*, based on recognition of similarity of interests and fortunes of the mankind as a whole, necessity to solve global problems exception of wars, terrorism and violence from the international relations, admission of variety and equality of cultures and religions, responsibility before the future generations for a survival and prosperity of human race are major precondition of creation of the effective mechanism of the sustainable development on the basis of dialogue cooperation and partnership of countries and civilizations.

3.2. *A system of authorities relations* on civilization's and global levels on the basis of voluntary transfer of part of executive powers to global and civilization's over-state structures for solving problems of their competence should be formed under control of a global civil society. The speech does not go about refusal of the national states from the sovereignty and its delegation to a level of the world state and government, but about more expedient reallocating of executive powers between a national and global levels for effective solution of tasks, facing every level. Voluntary transmission by states of the West-European civilization of a part of their competence and resources to legislative, executive and judicial organs of the European Union can be served as the example (model).

3.3. Forming *the global legal system* on the basis of existing norms of international law and their development for legal supply of dialogue and partnership of civilizations. This system should cover all major spheres and forms of the international cooperation in solving key global problems, as well as regulate control's regime of observance of the established norms of the law, of applying sanctions for their violation if necessary, of formation and operation of global representative, executive and judicial bodies. The process of forming of the global legal system will take up some decades, but it is necessary to begin it now on the basis of the existing international agreements.

3.4. *The United Nations Organization*, which has accumulated valuable experience of dialogue and cooperation of the states and civilizations in solving global problems and resolving conflicts

between states, is a primary base for development of executive powers and rights at a global level. It is necessary to support proposals on development and reinforcement of the UNO, contained in the report of the UN Secretary General «We, Peoples: the United Nations Organization at the 21<sup>st</sup> Century» and in the Millennium's Declaration of the United Nations Organization. It would have been good to create representative scientific council attached to the UNO and the UNESCO for working out concept and mechanism of dialogue and partnership of civilizations for sustainable development and solution of key global problems.

3.5. New world structure, based on the multipolar model, can be created only under initiative and mass support *of international public movements and nongovernmental organizations*, maintaining, explicating and realizing the idea of dialogue and partnership of civilizations, under development of these ideas by new generations, which would accept destined decisions at the 21<sup>st</sup> century – century of transformation of global community on principally new sources, discontinuing traditions of dissociation and enmity of nations, states, civilizations and religious developing. The task is to promote in every possible way creation and activity of such movements (specially of youth) and non governmental organizations, to listen to them in activity of the UNO, the UNESCO and other international bodies.

3.6. Formation of *the multipolar world structure* in the extremely complex, promptly varying world, with an increasing flows of new opportunities and dangers is impossible without reliable scientific base. Hailing efforts of the scholars from different countries on scientific development and discussion of actual problems of globalization and interactions of civilizations, it is necessary to aspire creation of the scientifically justified concept and forecast of the mankind's movement in this direction in the 21<sup>st</sup> century as the base of long-term strategy for development of the mankind.

## **4. World Rent, Anti-rent and Quasi-rent as the Source of the Sustainable Development**

4.1. The important source of the sustainable development and solution of key global problems 21<sup>st</sup> century on the basis partner-

ship of civilization is *world natural rent, ecological anti-rent and technological and financial quasi-rent*.

Natural rent is an additional income, earned and owned by local civilizations, nations and TNC, which take advantage from their being set in an auspicious resource environment, as they enjoy fertile soils, opportunities to irrigate them, minerals, and forests. Natural rent can also result from a better climate location or being a center of trade routs.

*Ecological rent* is an additional income, or profit, by which countries, civilizations, companies and TNC benefit as they make breakthrough to reduction of environment pollution, rational natural resource use, and implementation of more efficient safe environment technologies. Yet huge profits are reported here and there as being made at the expense of predatory exploitation of natural resources, negligence of actions bound to be taken in order to keep environment safe and to prevent overrated contamination. This is to be referred to as *ecological anti-rent*.

Relative additional income can be a privilege countries, civilizations, companies and TNC enjoy as not resultant from natural factor only, but due to ownership of intellectual property, breakthrough in science and technology, pioneer mastering and use of more efficient machinery, managerial policies, and manufacture patterns. It may be thereupon a good idea to identify *quasi-rent*, with a further distinction to be given to such its species as intellectual, technological, managerial, organizational, and monetary-financial. *Technological quasi-rent* has a temporary and unstable character. It vanishes once more efficient technologies gain an overall spread, being mastered by the majority of countries and civilizations and dictating a socially acceptable rate of expenses, world prices and goods quality. That is the rent, or rather pursuit for the extra-profit it yields, and that makes up a major stimulus, a propelling motifs of global scientific, technological and economic progress.

4.2. The significance of *technological factor*, or technological quasi-rent, sharply hopped in the industrial society. Industrial revolution accosting **Paul Kennedy**, became the basis for a headlong enhancement of the British, and later the U.S. share in world industrial market (from 1.9% in 1750 up to 22.9 % in 1880; from 0.1% up to 23.6% in the 1900), while China's and India's lag in technology led to the decline Of their share down from 32.6 and 24.5 to 6.2%

and 1.7% respectively. The tendency only gains a brighter manifestation in the 20<sup>th</sup> century. Countries and civilizations which enjoyed technological advantage gained a rapidly increasing bulk of quasi-rent. In 1950, according to the estimation of Samuel Huntington, the share of Western civilization in global economic production accounted for 64.1%, while the same figure for the Chinese civilization was 3.3%, for the Hindu 3.8%, the Moslem 2.9%, and Latin American 5.6%. The Western European, and subsequently the North American civilizations, became a powerful pulp emptying the whole world off technological rent due to the export of a more advanced machinery and technology and leaving world market clear of the formerly powerful civilizations of China and India.

Though reaching into such huge growth rates, global technological quasi-rent went on alongside flows of natural rent, which, just the same, grew multifold. New natural resource such as oil, natural gas, a spectrum of ferrous and non-ferrous metals, being now involved into production since fit technologies were invented was a hand to this process. Among other stimuli were more efficient exploitation of the old species, for instance, new technologies applied for minerals and wood processing, and soil fertilizers; multifold cut of natural resources transportation fees and their processed products; extension of exploitation over new rich resource bases in colonial, semi-colonial, and dependent countries. Meanwhile ecological anti-rent built up to enrich metropolises due to the predatory exhaustion of natural resources in the latter territories.

It was the flows of technological quasi-rent, natural rent, and ecological anti-rent that came to be the yeast to give rise to the wealth and power of the Western civilization, which bent to its obedience, either directly or not, other civilizations, which doomed them to years of vegetation and impotence. Fight to re-distribute these flows was a background for two world wars in the 20<sup>th</sup> Centuries for which human history has no match.

4.3. Things however were tending to become different in the late quarter of the 20<sup>th</sup> century, as *the transition from industrial towards post-industrial society* has begun to unfold. Flows of world rent getting scarcer; its re-distribution became central to nations yet again. Several factors can be detected here.

*First*, the industrial technological mode of production is superseded by the post-industrial one, with the fifth technological

order's being a transitive nature. Japan, new industrial countries, and Australia now had their hand in the struggle for benefits of world technological rent. Additionally, the spread rates of basis innovations grew high to the extent that made it considerably difficult to hold back extra-profit, i.e. quasi-rent resulted from pioneer development and monopolist use.

*Second*, exhaustion of best natural resources, such as richest fossils, tropical forests, available sources of fresh waters and arable, currently involved in global reproduction, is obviously becoming a threat. Post-colonial civilizations has claimed the greater share in world natural rent, of which the petrol crisis of the 70s–80s, magnifying many time over the bulk and share of the natural rent benefited by oil exporting nations, was a brightest evidence. This crisis provoked a leap-like growth of world export rates, rising them 4 times during the 70s, while the growth was at just 22% during the next 16 years. As a result, the fuel share in world export structure, estimated in current prices, accounted for 24% in the year 1980, up from 9.3% in 1970. It however dropped to 7.8 % in 1997. There is yet a manifest tendency to a decline of world natural rent and rise of scales and shares of technological quasi-rent, chiefly produced in machine building and chemistry. Technological quasi-rent is commonly a loot of the developed countries which account for two thirds of world exports and have 80% share of manufacture goods in their export structure.

*Third*, exhaustion of natural resources and environment contamination grew to as high a degree as makes it rather impracticable to subsist on ecological rent. All countries and civilizations witness a tougher ecological control exercised by state administration and green movements.

Therefore, as a deepest and basic leverage to cause clashes of interests and confrontation of civilizations at the current break of centuries and millennia comes to figure the sharpening struggle that nations and civilizations lead for re-distribution of the flows of world quasi-rent, rent and anti-rent, which grow scarce as goes on transformation of the industrial society into the post-industrial one.

4.4. What are the prospects of global rent flows and their being redistributed on international basis in the 21<sup>st</sup> century? A number of factors are to be identified here that exert influence upon this development.

**First**, we have globalization, or the increasing power of transnational corporations (TNC), to precipitate formation of a global technological, economic and informational space, making short the capacity of nation-states as to cope with detained rent influxes. Together with the influxes within world financial centers, there is a distribution and re-distribution of all kinds of world rent to the benefit of TNC which thus gain opportunity of shaping rent flows and using them to their needs without a control from elsewhere.

**Second**, facing the challenge of the globalization built on the Western pattern to press the needs of TNC, there is a growing opposition on the side of other local civilizations, their fourth generation going under formation. China, Latin America and India witnessing an impressive economic rise; Japan and Asia's new industrial countries overcoming the shocking end of the 90s; Russia gradually coming to realization of its national interests, recovering after the deepest civilizational crisis; it is obvious that the Western countries' and TNC's possession of world rent will only meet a stronger opposition.

**Third**, formation of post-industrial technological mode of production, of the sixth technological order (starting since the 10s of this century), will result into greater scales of world rent being produced and possessed. However, it will be increasingly troublesome to redistribute in the favor of few advanced civilizations (North American, Western European and Japanese).

**Fourth**, the share, and consequently the scales, of world natural rent are most likely to become shorter due to exhaustion of natural resources — fewer deposits of fossils, tropical woods, fish products in the global ocean — and with irrevocable growth of the earth population up to the very end of this century. An absolute and relative rise in costs of raw materials will work as an antidote to this tendency, yet it to a certain limit.

**Fifth**, a drop of world ecological anti-rent will both in share and mass is to be expected as a result from more severe control imposed nationally and internationally upon contamination of natural environment. Simultaneously, technological quasi-rent and ecological anti-rent may combine yet to bigger rent flows due to spread of safer and more efficient environmental devices, low waste and non-waste technology etc.

4.5. The work of the factors above can result into *sharper inter-civilizational struggle* for re-distribution and distribution of rental

flows. It is rather obvious, however, that issues and contradictions here to arise should only be settled on the firm basis of dialogue and partnership between civilizations. It is as early as in the middle of the 21<sup>st</sup> century that mankind will to face openly a paramount problem of exhausted mineral fuel, raw materials, and forest and fresh water to be urgently substituted of newer sources which technological overturn will yield. There can be no other rational solution to such issue except only to be made on a global scale by the joint efforts of all civilizations. The same refers to the prevention of global eco-catastrophe and danger of suicidal civilization clash. Another such joint mission is bringing closer together populations of various civilizations in technological and economic development and life standards. A fairer mechanism of world rent, anti-rent, and quasi-rent distribution and its use up to shared interests could really be a factor into this process.

On the basis of dialogue and cooperation of the countries and civilizations in the framework of United Nations may by elaborate effective mechanism of distribution and utilization the part of the world natural rent, ecological anti-rent, technological and financial quasi-rent for the support of the poor countries and civilizations, help in its technological and educational progress and for solution of global problems of 21<sup>st</sup> century.

## **Supplement 4**

# **WORLD TRADE AND FAIRNESS: CIVILIZATIONAL ASPECT<sup>1</sup>**

## **The Impact of Trade on Various World's Civilizations**

The concepts of «world trade» and «fairness» appear to be incommensurable, belong to different dimensions. The first is a characteristic of the density in relations between national economies, international economic organizations, transnational corporations (TNC) and other participants of the global market. The second belongs to the dimension of moral judgements, lying in the domain of civilizational values and being at first glance very far from the domain of economy. But a deeper piercing analysis shows that both concepts are not only interconnected, but also intercepting and penetrating each other. It is quite possible to speak about fair and unfair types of economic relations, fair and unfair globalization models as well as about economic effectiveness of moral judgement of those relations and models, a test for its fairness and justice. And there should be no wonder that the oncoming World Bank's report on global development will be named «Justice and Development». The report will include some global aspect, for instance, ways to make the global markets' functioning more fair and just.

Nobel Prize winner in economics **Josef E. Stiglitz** is bestowed by the gift to discover paradoxical situations and unexpected issues in relations between phenomena and categories, to expose global contradictions, to suggest nonstandard ways of solving them. He revealed this gift in his works on Washington and post-Washington consensuses, in his books «Globalization and its Discontents» (2002) and the «Roaring Nineties» (2003). His new «Fair Trade for All. How Trade Can Promote Development» (2006) written together with **Andrew Charlton**, is once more demonstrating the qualities of Prof. Stiglitz, mentioned above. Now this book, translated into Russian, is offered to the Russian reader.

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<sup>1</sup> Foreword to the book of *J. Stiglitz* and *A. Charlton* «Fair Trade for All. How Trade Can Promote Development», translated by **G.G. Pirogov**.

We would like to look at the problem of establishing more fair global economic order, at the mutual relations between developed and underdeveloped countries on the ground of the World Trade Organization (WTO) from the standpoint of the relations between rich and poor civilizations in the framework of the global civilization, which is representing the interests of the whole mankind as a single system, as a crew of a giant spaceship, speeding at enormous rate through the emptiness of the Universe. Like Noah's Ark, its decks and cabins are inhabited by various civilizations, nations and peoples. Every one of them has its own economy, culture and religion, its own state system and spheres of interest, frequently contradicting each other, its own unique historical destiny. But the highest priority for all of us is the safety of our giant spaceship in its traveling through the whirlpools of the ocean named Universe, standing firm to complete successfully our common mission.

In the complicate palette of the interrelations (technological, geopolitical and socio-cultural) between civilizations and nations laws of differentiation and competing development are acting (in a wide range from cooperation to confrontation). The latter was frequently taking in the 20<sup>th</sup> century very destructive forms. Some civilizations and nations run away full with innovational energy. They make other nations follow them. There are also those, which lose leadership or fall behind for a considerable period of time, becoming feeding grounds for their stronger neighbors. From time to time a civilization comes to the end of its lifecycle and leaves the arena of history, disappearing from the deck of the spaceship. Other civilizations are emerging and making their claims for leadership. This is how the normal process of cyclical dynamics of local civilizations as well as the global civilization is going on, described in our book «Civilizations: Theory, history, dialog and the future» in two volumes.

In the industrial era, however, after the industrial revolution, the process of differentiation evolved to stronger unevenness and polarization, producing an ever growing gap between the advanced and lagging, rich and poor civilizations or states. What the level of the polarization has reached to the beginning of the XXI century can be assessed by using the data of the World Bank's report «2000 World Development Indicators». In 2004 the gap between the group of countries with high income levels (1004 mln. people; 15.8% of Earth population — the so called «golden billion») and the group of countries with low income level (2343 mln. 36.8% called

sometimes «the pole of misery») measured by GDP per capita skyrocketed to 1:63.3, measured in BPP; the indicator «buying power ability» gives less drastic but nevertheless very impressive results, 1:5.9 and 1:13.7 correspondingly. As to the share in world exports of goods and commodities the gap was 1:31.3; the gap by assets market capitalization 1:786, and by health care expenditures — 1:115.

The poorest countries and civilizations are characterized by extreme technological backwardness and a very low share in the total revenue from selling know-how. Very high is meanwhile in those countries the level of social stratification — the gap between a handful of superrich and the majority of population living in terrible misery and being brought at the edge of despair. In spite of the concentration of main part of world's natural resources in the poor countries the rental income of their exploitation is expropriated by TNC, which have their headquarters located in rich countries, a small group of oil barons, compradors and highly corrupted top administration of the poor countries. Roughly a quarter of the world's population has still no access to electricity, not to mention the necessities of higher order. Millions of people die of starvation.

This is the kind of wealth distributional order which is today only one available to mankind. It is extremely unfair, provoking indignation and anger among many millions of households, who are not able to secure even minimal living and development conditions. The polarization is a growing danger to the present and the future world as the concentration of social discontent within the poorest civilizations is reinforcing threats of and open displays of intercivilizational conflicts as well as terrorism not only in the discontinuity areas at the border between civilizations but also in the centers of civilizations. As a warning to such developments may be considered the recent unrest in France and other countries, a storm of protests in Muslim countries provoked by being at the first glance an event of minor importance — a publication of a series of offensive cartoons in a Danish newspaper. Clusters of anger are ripening and seeking occasions for destructive explosions of fiery to sweep off everything on their ways.

UN has tried to respond this historical challenge by developing at the Millennium summit 2003 a program with a horizon up to 2015 for reducing the gap between rich and poor countries. But to be quite honest the implementation of the program is going on without any sufficient progress, as the UN has neither means nor

political instruments to secure it. Promulgated on the summit in Rio-de-Janeiro in 1992 confirmed and developed on the summit in Johannesburg in 2002 global program of sustainable growth is remaining in many aspects no more than a sum of good intentions. The real politics of the WTO and the IMF usually is helping to promote the interests of TNC and richest countries, is implementing measures, serving their interests. It is evoking even more indignation on part of the majority of the poorest countries carrying growing losses due to the game rules, established on the global markets.

Under the circumstances described above, the publishing of the book «Fair Trade for All. How Trade Can Facilitate Development» is both acute and timely. In this work the authors expose the dangers of the today's international system of world trade regulation, which arose in the last decade of the 20<sup>th</sup> century and the beginning of the 21<sup>st</sup> century. This book contains also a science-based, highly professional program of actions aimed to transform the WTO into an instrument of facilitating development and eliminating the very dangerous excessively large gap between the superior very small minority and the extremely poor majority of states and civilizations.

The authors are warning that the failure of the Seattle round of the WTO (where the antiglobalistic movement took start) and in Cancun (2003) have marked dangerous trends of the schism in the global system of the economic regulation mechanism. «On the turn of millennium,» — says **J. Stiglitz** in the foreword to his book, — «there was a new sense of collective responsibility for the challenge faced by poor countries, and also a recognition of the inequities, created by previous rounds of trade negotiation. The advanced industrial countries responded to the events at Seattle and the broader public support for a new approach to international issues. At Doha in November 2001 they agreed to an agenda that they claimed reflected the concerns of the developing nations, but a year and a half later it was clear that the developed countries were, by and large, renegeing on the promises they made at Doha».

«The goal of this book is to analyze the negative trends, rising in the world economy and generating a justified indignation on the part of the developing countries as well as present a well-grounded program along with mechanisms of a new negotiation round — a true development round, able to secure a turning point of these trends. This book describes policy measures that would do the most to integrate the developing countries into the world trading system, to give them new trading opportunities and help them to capitalize

on these opportunities. It is premised on the hope that a better understanding of the effect of trade agreements will help mobilize public opinion in both developed and less developed countries; that it will strengthen the case for negotiations in the hard bargaining that marks any round of negotiations; and that it will bring about reforms in the procedures and in institutions of the WTO, which will enhance transparency and more equitable outcomes».

The chapter 13 of this book contains a large scale, brought to concrete details, program of the development round, providing means to attain the elaborated goals. The authors are defending a differentiated approach to the implementation of the liberal principle of the world trade with respect to the differences in the situation in each country.

Concrete aspects of the Doha round agenda are considered and criticized as well as opportunities to transform it into a true development round, facilitating the integration of developing countries into the world trade and elimination of barriers impeding them to capture advantages of this integration to reduce the huge gap between the poor and the developed nations. To achieve these goals it is necessary to choose a certain criterion used in the case of signing any trade agreement. The appropriate criterion should be of such a kind that the signed agreement has to lead to further growth and development of the poor countries.

The WTO needs to foster a culture of robust economic analysis to identify pro-development proposals and promote them to the top of the agenda. It suggests also an activation of the positions and a more competent approach on the side of the developing countries involved in the negotiations.

The authors argue in favor of development as a priority having to find its place in any agreement signed as a result of the development round. The highest priorities are the elimination of the barriers and protectionist measures for agricultural markets of the developed countries, the securing of labor force mobility and temporary migration of skilled labor force, the reduction of non-tariff barriers, the carrying out institutional reforms to promote more constructive and equitable negotiation process, the facilitating the movement towards a new type of a trade order. We do not expound further the content of this suggestions, they are sufficiently detailed and argued in the chapters of this book.

The formulation of a new agenda of measures suggested for the development round in the framework of the WTO does not exhaust

the significance of this book. The implementation of the program promulgated by the authors would mean the emergence of a new worldwide economic order, based of partnership and securing a gradual reduction of the gap between rich and poor countries and civilizations, a more fair and just new order, which would be therefore more stable and safe.

There may rise a reasonable question: how realistic is this program? Has it any chance to be implemented, in spite of the resistance of powerful greedy TNC, of the developed countries and civilizations, of the international organizations, representing and defending their interests?

The situation is not so desperate as it appear to the numerous skeptics and pessimists. No wonder that in the foreword to this book Prof. Stiglitz is citing the well maxim «Knowledge is power». It is useful also to remember a major thesis of **Karl Marx** «ideas transform into material power when they capture great masses of people». We can also remember our recent past. A convincing and terrifying scenario of a «nuclear winter» was developed by the Russian scientist **Nikita Moissejev**, who was testing on computer the hypothesis of the American scientist **Carl Sagan**. When the scenario has become known to the world public and governments involved in the «Cold War», its impact changed the course of the world history, bringing to end the struggle, which has put the mankind on the edge of self-destruction.

The current situation in the global economic space is a deadlock no less terrifying as it was during the «Cold War». It is explosive. Reading the works of Prof. Stiglitz and other scientists would help the mankind to stop at the verge of the abyss and step back to begin seeking for better ways. What means the publishing of the Russian version? We would like to emphasize two points. Firstly, it could help Russia and other CIS nations to negotiate on joining the WTO more clearly and realistically recognizing their own interests as well as their risks emerging by joining the WTO and striving for more favorable conditions. This book is a kind of specific textbook and a collection of instructions for negotiators and decision makers. Secondly, we have not to undervalue the role of Russia in the transformation of the world economic relations. What matters is not Russia's percentage share in the world trade (today it is insignificant). Moreover our country is not yet a WTO-member and does not take part in the new round. But Russia is one of the great powers, a standing member of the UN Security Council and the chair-

man for the year 2006 of the G8. Russia is closely connected with both Western and Eastern civilizations and has a unique intellectual potential as well as strong geopolitical positions. Having now the Russian version of this book is a great help to our leadership, business and political circles, along with general public in their efforts to use their influence more competently and efficiently to form a new, more fair and just and also better functioning system of global economic relations.

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## **Supplement 5**

# **SIX ENIGMAS OF THE MINOAN CIVILIZATION**

**T**he Minoan civilization is numbered among local civilizations of the first generation, its historical time falls to the end of the 4<sup>th</sup> to the beginning of the 1<sup>st</sup> millennium B.C.<sup>1</sup>. The historical framework of the Minoan civilizations is clearly defined – 2600–1100 B.C. It is younger than Egyptian, Sumerian and Indian civilizations, but it is a contemporary of Chinese, civilizations of the first generation<sup>1</sup>. And still, it occupies a special place among these civilizations<sup>2</sup>. How does this peculiarity express itself and what are historical enigmas of this civilization?

This is an ancestress of all European local civilizations of four generations followed after (including civilization of the fifth generation aborning at the turn of the third millennia Western European, Eastern European and Eurasian the nucleus of which is Russia). Through the Cretan-Mycenaean, and then classic Greek and Roman civilizations, its heritage was transmitted to the peoples of all territories and mixed with the heritage of the southern civilizations (Egypt, Mesopotamia and the Arabic world) and the Orient (India, China, Mongolia and Japan). At the same time it is the youngest civilization for science: it was discovered a little more than a century ago when the British archeologist Sir **Arthur Evans** began the excavations of the Knossos Palace and discovered a civilization he called Minoan after the legendary Cretan king Minos described by **Homer**, **Plato** and **Aristotle**.

The Minoan civilization is the smallest of all civilizations of the first generation both by territory and population size. The territory of Crete Island – the fifth island in the Mediterranean Sea – 8 261 sq. m – all in all 0.006% of today's world, the length of the island makes 257 km by its meridian, width ranges from 13 to 60 km.

**The first enigma:** *how such small area of populated Earth could give rise to a great civilization that determined the history of civilization of all Europe in many ways?*

<sup>1</sup> *Kuzyk B.N., Yakovets Yu. V. Civilizations: Theory, History, Dialogue and the Future: in 2 volumes. Vol.1: A Theory and History of Civilizations. M.: INES, 2006. Yakovets Yu. V. The Past and the Future of Civilizations. Leviston-Queenston Lampeater: The Edwin Mellen Press, 2000.*

<sup>2</sup> This article is written by Yu.V. Yakovets after his trip to Crete in August 2006.

Greek archeologist **Soso Logiadu-Platonos** answers partially to this question: «The location of Crete is very advantageous for both the domination of the Minoans in the seas and for the establishment and bloom of their brilliant civilization. At the crossroads of the routes between three continents a meeting and combination of various ethnical elements and cultural influences originating from Asia, Africa and Europe occurred and established thereby new life conditions, new view of the world and a special art that still amazes by its freshness, diversity and dynamism»<sup>1</sup>.

However, it is not a full clue to the enigma. Cyprus Island bigger by its size is located in the vicinity of Crete; Sicily, Sardinia and Corsica are found between Europe and Africa in the Mediterranean Sea; however, they didn't become the centers of an independent civilization comparable with Minoan.

Was this Minoan civilization an original, local civilization or was it introduced by representatives of other civilizations – for instance, Egyptian – that moved to the island? Thus, US historian **W. McNeil** believes that «Crete was peopleless until it was colonized by the seamen of the Neolithic», that «appearingly, the history of seafaring in the Mediterranean Sea began about 4000 B.C. when the population of the Neolithic first appeared on Crete. The cultural influence of the continent is traced in a greater or lesser degree throughout one thousand year. The occupation layers date from the 3<sup>rd</sup> millennium B.C. containing conclusive evidence of economic ties with Egypt»<sup>2</sup>.

Ukrainian historian of civilizations **Yu. V.Pavlenko** states more definitely that Minoan Crete and the Cyclades were a distant periphery of the Eneolithic civilizations of the valleys of great rivers»<sup>3</sup>.

It is indubitable that the Minoan civilization could not exist and develop without economic and cultural ties with neighbors. But could it be viewed as a peripheral more ancient civilization? Anyway, there is no direct evidence of such origin at the Archeological Museum in the capital of Crete Heraklion which has an ample collection of cultural artifacts of the Minoan civi-

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<sup>1</sup> *Logiadu-Platonos S.* Knossos The Palace of Minon, The Minoan Civilization. Athens, 2006, p. 7, 11.

<sup>2</sup> *McNeil W.* The Rise of the West: A History of the Human Community. Kiev: Center; Moscow, 2004, p. 154.

<sup>3</sup> *Pavlenko Yu. V.* A History of the World Civilization. Philosophical Analysis. Kiev: Foenix, 2002, p. 293.

lization. Also, the differences of the Minoan civilization are quite significant so that to view it as a daughter to Egyptian. It still remains an enigma how and why a unique civilization could emerge on that relatively small island distant from three continents (Europe, Asia and Africa).

**The second enigma: *what people created the Minoan civilization?***

**A. Toynbee** being based on the contour of anthropometric data has come to the conclusion that these were the remote Africans, and not the neighboring Asians who first ventured to cross unknown large lengths of sea and became the fathers of the Minoan civilization as if in reward<sup>1</sup>; «in the period of draught some of the African communities moved towards the Mediterranean Sea and established a civilization on Crete then»<sup>2</sup>.

However, in scientific comments to the Russian edition of A. Toynbee's book its editors do not share this opinion. «The anthropological data on which A. Toynbee relies are not accurate, and chronological conclusions are not very reliable. The ancient residents of both Crete and continental Greece belonged to the Mediterranean, long-headed type and there are no reasons to view them as originating from North Africa. Their culture was lower than in Front Asia, while the rise of civilization in continental Hellas and on Crete is connected with the incursions of tribes of the Front Asian type on Europe from Asia Minor. This incursion occurred in the middle of the 3<sup>rd</sup> millennium B.C.»<sup>3</sup>.

The population on Crete was numerous. Homer named five tribes (ethno-Cretans, Pelasts, Kiphons, Achaeans and Dorians) each of which spoke its own language, and only the last two belonged to Greek that came to the island by the end of the 2<sup>nd</sup> millennium B.C. S. Logiadu-Platonos thinks that the Minoans are included in the so-called «Mediterranean race»<sup>4</sup> for whom it is typical to be relatively short with curly hair and brown eyes. Their language is unknown as written records of the Minoans are undeciphered, however, it appears that they belong to a special group of the Mediterranean languages<sup>5</sup>.

<sup>1</sup> *Toynbee A.J.* A Study of History. Collection. M. Progress, 1991, p. 119.

<sup>2</sup> *Ibid.*, p. 687.

<sup>3</sup> *Ibid.*, p. 687.

<sup>4</sup> *Logiadu-Platonos S.* Knossos The Palace of Minon, The Minoan Civilization. Athens. 2006. p. 2,11.

<sup>5</sup> *Ibid.*, p. 11.

According to contemporary periodization suggested by Prof. N. Platon and underlying the chronological arrangement of artefacts in one of the richest Archeological Museums in Europe in today's capital of Crete Heraklion, the history of the Minoan civilization includes the following periods:

- ➔ the Neolithic (6000–2600 B.C.);
- ➔ the Minoan period:
- ➔ Prepalatial period – 2600–1900 B.C.;
- ➔ Protopalatial period – 1900–1700 B.C.;
- ➔ Neopalatial period – 1700–1350 B.C.;
- ➔ Postpalatial period – 1350–1100 B.C.;
- ➔ Subminoan Period – 1100–1000 B.C.

The Minoan civilization reached the apex of its rise long before the Greeks, first Achaeans and then Dorians, came to the island. There were built the Knossos Palace, huge even from a modern viewpoint (total area up to 20 thous. sq. m), palaces in Phaistos, Malia and Zakros, from 90 to 100 cities. But still who is the founder of the Minoan civilization? Where were they from and when did they appear on the island, how could a passionary outburst be explained that resulted in the nascence of a great civilization on a small island distant from continents?

**The third enigma:** *Crete is extremely poorly endowed with natural resources.* Nearly all territory is covered with mountains. There are no large rivers, fertile valleys and large mineral deposits. The history of the Minoan civilization is rich with major natural catastrophes that changed its face. The archeologists speak about three such catastrophes: about 1700 – it was likely an earthquake as a result of which palaces and settlements of the Protopalatial period were ruined; about 1450 B.C. when as a result of volcanic eruption on Santorini Island found nearby there were ruined, restored and newly built palaces. The Knossos Palace only was restored thereafter and began to serve as the residence of the Achaean dynasty; the catastrophe of about 1350 when the Minoan palaces were not restored anymore, and the Achaeans built palaces in new areas that already belong to the Cretan-Mycenaean culture (it may be viewed as a sub-civilization of the period of the decline of the first generation of local civilizations). «The last phase of that period of decline and troublous time caused by moving to more extensive regions of the Eastern Mediterranean of the

Figure 1

**Bull's Head Rython**

Carved out of steatite with gilded horns, with eyes made of red jasper, and white shell or marble for the line around the nostrils. The Little Palace at Knossos, 16<sup>th</sup> century B.C.

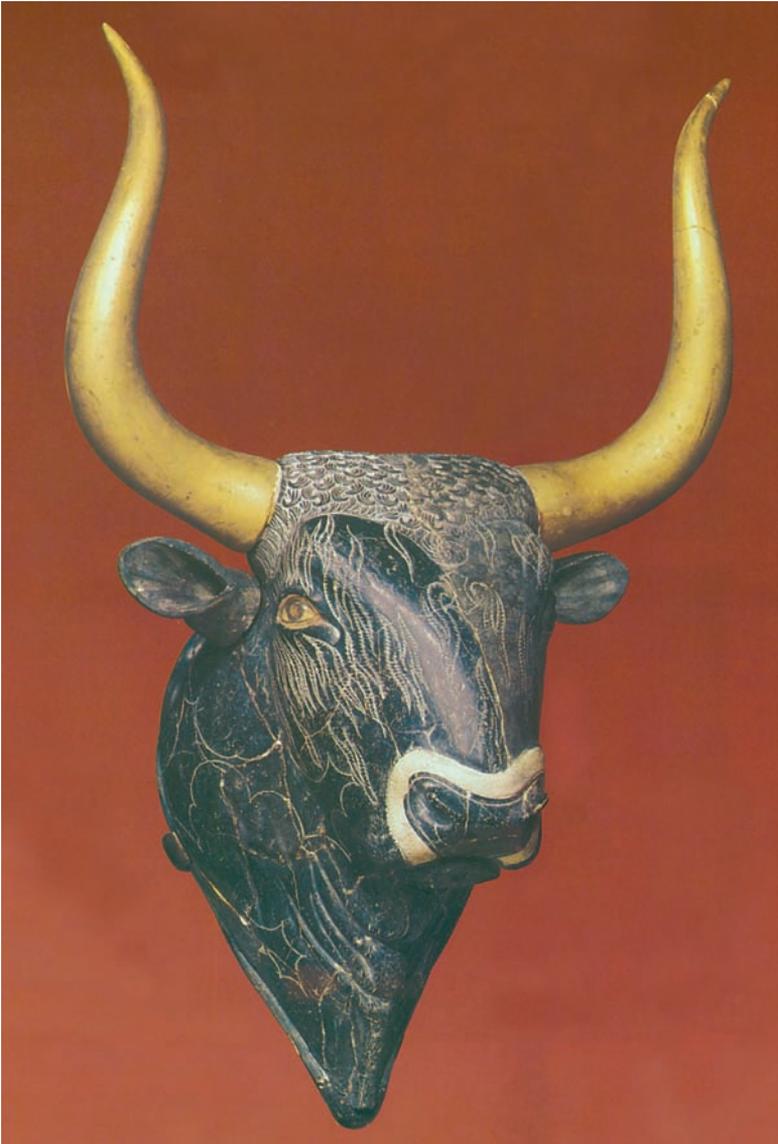


Figure 2

**The Palace of Knossos, Western Flank**





Figure 3

**The Phaistos Disk**

Clay tablet with early writing, which resembles hieroglyphic signs. Several symbols are grouped in a spiral manner between lines on both faces of the disk. The script has not been deciphered to date. 1600 B.C.



“thalassic people”. Apparently, the first waves of the Dorian tribes began to arrive to Crete. With the mass coming of the Dorians about 1100 B.C. Crete entered a purely Greek period of its history. Next after it, the early geometrical period (1100–900 B.C.) coexisted with the Sub-Minoan as the ancient Cretan cultural tradition continued resisting, especially in the mountain centers of ethno Cretans»<sup>1</sup>.

It should be taken into account one specific feature of the natural environment of the Minoan civilization. Most civilizations of the first generation emerged in the fertile valleys of great historical rivers (Nile, Tigris and Euphrates, Indus and Ganges, Huang He and Yangtze). The Minoan civilization came into existence on the island distant from the continents where there are neither large rivers, nor even medium rivers and with only two freshwater lakes. This is the only insular civilization of the first, but even next generations of civilizations. Nevertheless, Crete became the center of an extensive civilization with a powerful fleet and subjugated a considerable part of the Eastern Mediterranean so that Athens and other Greek cities had to pay tributes to Cretan King Minos. «Thucydides wrote that due to its fleet Minos first established his power over the Aegean Sea, seized the Cyclades where he moved the settlements and drove out the Caryans and freed the sea from pirates. Plato narrated about a heavy tribute that the Attic people had to pay to Minos, and the historical core of the myth about Theseus could be traced here, and Aristotle explained thalassocracy (“the domination on the sea”) of Minos by the geographical setting of Crete»<sup>2</sup>.

The insular, considerably isolated position of the Minoan civilization had its pluses and minuses. On the one hand, the remoteness of Crete from other stronger countries and civilizations lessened the threats of incursions of its neighbors, and the Minoan civilization was considerably less bellicose and aggressive than, for instance, civilizations of Egypt and Mesopotamia of that period. In the Heraklion Archeological Museum there are few exhibits showing military equipment of the Minoans.

On the other hand, a comparative isolation of the Minoan civilization, especially at the first stages of its establishment and development, hampered economic and cultural exchange with other civi-

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<sup>1</sup> *Logiada-Platonos S. Knossos The Palace of Minon, The Minoan Civilization*. Athens, 2006, p. 29.

<sup>2</sup> *Ibid.*, p. 7.

lizations. In the same Archeological Museum the items from Egypt and other highly developed civilizations of the first generation are nearly not represented. Nevertheless, it remains an enigma: how on a comparatively small island mainly covered with mountains and poorly endowed with natural resources, away from other civilizational centers of that time a civilization could emerge and reached its bloom the culture of which is comparable and at some points excels the achievements of great continental civilizations of that period?

Some historians (**Yu. V. Pavlenko, G.A. Melikishvilli**) include Minoan Crete in the number of «military civilizations» the integrity and wealth of which rested on the military force of political center<sup>1</sup>; «the Minoan dominance over acquired areas of Hellas was determined by the force of fleet (so-called Cretan talassocracy)»<sup>2</sup>. In such case, the source of wealth of the Minoan civilization became the proceeds from the Mediterranean colonies conquered using a strong fleet.

**W. McNeil** holds the opposite point of view on the Cretan economy: «The Minoans came to civilization a different way. Wealth made by sea trading and inspiration derived from more developed peopled trading with them allowed them create culture and art that may be observed on the ruins of Knossos. The priests and not the warlords dominated in political life of Crete. It is likely that wealth and power of Knossos rested on foreign trade and religious privileges and appropriation and nearly did not depend on the incursions on lands and forced labor»<sup>3</sup>.

But if this is the case, then the major source of wealth and well-being of the Minoan civilization was not military conquests and spoils, but dialogue and economic exchange with other civilizations and peoples of the Mediterranean. **W. McNeil** proceeds generally from the understanding of contacts with foreigners who possessed new unknown knowledge and skills<sup>4</sup> as the major factor contributing to historically significant III changes. Therefore «the contacts between civilizations that existed in one and the same time should also be the object in studying the world history as they are intended to change the scope and diversity of knowledge and technologies of each civilization and to influence on the overall picture of mutual penetration of cultures»<sup>5</sup>. In any case, it still remains an enigma

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<sup>1</sup> *Pavlenko Yu. V.*, *ibid.*, p. 267.

<sup>2</sup> *Ibid.*, p. 299.

<sup>3</sup> *McNeil W.*, *ibid.*, p. 154, 156.

<sup>4</sup> *Ibid.*, p. 13.

<sup>5</sup> *Ibid.*, p. 14.

the source of the emergence and rise of civilization of the first generation under extreme scarcity of its natural basis.

**The fourth enigma** of the Minoan civilization is *economic*. Construction of Knossos and other palaces required enormous labor, material and financial costs and resources, the application of efficient technologies; the palaces are comparable with the scale of construction works of pyramids and palaces of ancient Egypt, Babylon and Nineveh. However, Egypt and Mesopotamia had great possibilities to attract dozen and hundred thousand slaves and craftsmen, rich spoils for that, but Crete had no such opportunities. The Minoan civilization applied the labor tools of bronze, at the end of the Iron Age (although the Iron Age began later on the continent, at the beginning of the 1<sup>st</sup> millennium B.C.). Along with that the archeologists point out to a relatively high level of life of the most Minoans. A question arises: what labor capacity of the Minoans should have been, efficiency of farming, cattle raising, crafts and trade of the Minoans so that to maintain construction and restoration of magnificent palaces after devastating earthquakes and concurrently to ensure a satisfactory level of life of population?

**The fifth enigma** is a *socio-cultural system of the Minoan civilization*. There is no information that it was based on slavery as in Egypt and Mesopotamia. No slaves could be acquired as there were no large military campaigns with the seizure of war prisoners and civilians and no traditions existed to convert their fellows into slaves as it was the case in Greece before the Solon reforms. **S. Logiadu-Platonos** writes that in the Prepalatial period (2600–1900 B.C.) «society had a tribal structure. Farming, cattle breeding, seafaring and trade developed and specialized»<sup>1</sup>. It may be assumed that proto-state formations similar to leader-based states (chiefdoms)<sup>2</sup> emerged at this stage.

At the beginning of the Protopalatial period (1900–1700 B.C.) the signs of state power are more obvious: «the power was concentrated in the hands of kings and first large palace centers were established that became the epicenters of a wide spread of culture among the Cretan population»<sup>3</sup>. The «city revolution» occurred exactly in that period later than in the Near East and

<sup>1</sup> *Logiadu-Platonoe S. ibid*, p. 12.

<sup>2</sup> *Ibid*, p. 12.

<sup>3</sup> *Ibid*, p. 12.

Egypt — the cities became the centers of political, economic and cultural life, the nucleus of the Minoan civilization.

In the Neopalatial period (1700–1350 B.C.) a «social structure of society was likely feudal and theocratic, and the king who resided in each of the palace centers was conferred the supreme priest dignity. A special hierarchy of these kings-priests headed by the Knossos lord might exist. Due to the existence of such structure a lasting peace was established on the island — famous *PAX MINOICA*. The result was a high development of culture, happy refined life and the Cretan talassocracy»<sup>1</sup>. This was in line with the upsurge of economy of the Minoan civilization: «Even more magnificent new palaces were built on the ruins of the old palaces and the cities pulsing with life spread around them, new settlements sprang up all over the island, many dwellings were built in isolation — residences of local rulers resembling castles of medieval feudalists and controlling extensive areas, the number and quality of roads increased; ports were built and many fast vessels delivered agricultural products and goods of the Cretan craftsmen to all ports of the then civilized world exchanging them for raw materials». The new Knossos Palace occupied the area of 22 thous. sq. m, numbered more than 1 500 premises and really resembled the labyrinth where it was easy to stray.

Certainly, it is early to speak about the feudal system in that period. But it little resembled the classic slavery system of other states of that period. Numerous records have not been deciphered yet — it is unknown what social system prevailed at various stages of a life cycle of the Minoan civilization.

**W. McNeil** assumes that the wealth was acquired through seagoing trade, this enabled to establish a unique structure of society where there was no slave labor and burdensome taxes typical of civilization in that period: and if the rulers of Knossos controlled the mercantile marine that ran between Crete, Egypt and Levant and Western Mediterranean, they could soon have enough wealth to maintain the staff of qualified craftsmen who built and decorated their palace-temples and not oppressing the Cretan peasants at the same time through high taxes and forced labor. In any case, the ease, generosity and elegance of the Minoan art as if reflected freer and unconcerned society different from ancient Mesopotamia and Anatolia... The Minoan civilization even in the period of its heyday was a kind of a hothouse plant needing its insular location so that to exist and develop»<sup>2</sup>.

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<sup>1</sup> *Logiadu-Platonos S. ibid, p. 17.*

<sup>2</sup> *McNeil W. ibid, p. 157.*

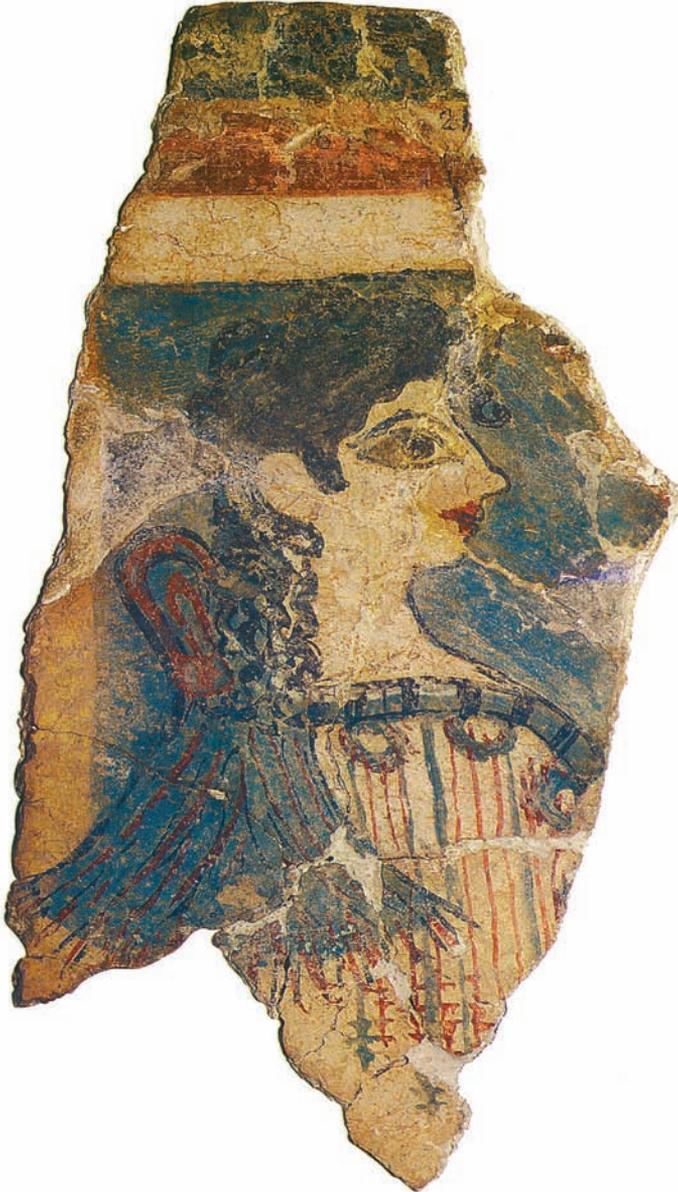
Figure 4

**Big Snake Goddess and Small Snake Goddess**



Figure 5

«La Parisienne» (priestess) from Palace of Minos, Knossos, Late Minoan, 15<sup>th</sup> century B.C.



If it is the case then this is a unique phenomenon for civilizations of the first two generations. But these statements are based on circumstantial evidence. Direct evidence of the social structure of the Minoan civilization will be likely get after its written artifacts are deciphered. In any case, this enigma of civilization of the so-called slavery period is in for solving and explaining.

**The fifth enigma.** The largest and intriguing enigma in *culture* still remains the undeciphered Cretan written lexigraphic (2000–1650 B.C.) Linear A script. The example of which (1750–1450 B.C.) is the famous Phaistos disc (about 1600 B.C.) covered with hieroglyphs on both sides generally a spiral inscription. The Minoan Linear B script developed in a later period. They succeeded to decipher it partially. Deciphering of the Minoan written language will be the largest discovery in archeology and history of civilizations.

In the Neopalatial period (1700–1350 B.C.) the Minoan culture reached its bloom. Knossos and other palaces were restored and filled with the greatest works of art decorated with frescoes; architecture of gorgeous palaces reached, and even excelled the attainments of other civilizations of that period. Speaking modern language, a share of gross domestic product earmarked for culture exceeded many times the share that was observed with the next generations of civilizations. This indicates the prime leading role of culture in life of the Minoan and other civilizations of the first generation (likewise in the later Greek civilization of the second generation). The works of art of that period at the Heraklion Archeological Museum amaze: the Head of a Bull (the 16<sup>th</sup> c. B.C.), python from rock crystal (1500–1450 B.C.), golden decorations with finest patterns «Prince with Lilies» and «La Parisienne» from the Knossos Palace etc. What are the sources of this great culture?

There is no complete information about religious views of the Minoans, and also development of culture (to build large palaces, design and operate large fleet is impossible not possessing applied scientific knowledge). The archeological discoveries indicate polytheism in the pantheon of gods where the supremacy was given to a Mother Goddess. They also worshipped the god of fertility represented in the image of bull. There are a lot of depictions of a sacral double-axe.

Cultural and religious heritage of the Minoan civilization was embraced by ancient Greeks in many ways (civilization of the second generation) that found its expression in the Greek mythology. According to one of the myths the head of the Greek Gods Zeus was born by the great goddess of Earth Rhea secretly from father Cronos who ate his children in one of the caves of Crete (where one of popular tourist routes leads). The nymphs fed the baby with goat's milk of Amalthea. After growing up Zeus won Cronos. Once he saw the daughter of the rich Phoenician ruler of Sadon beautiful Europe and Zeus raped it changing into a bull and brought to Crete. According to the legend Zeus was a friend and patron of Cretan king Minos.

Therefore a lofty spiritual world of the Minoan civilization, its brilliant culture survive not only in remarkable archeological artifacts discovered and returned to human memory in the 20<sup>th</sup> century only, after three millennia when the Minoan civilization faded away and left the historical arena like the light of the distant stars of the Universe reach the Earth in thousands and millions years after they faded. The Greek civilization became the immediate successor to great attainments of the Minoan civilization, its spiritual life, culture, system of civilizational values, and Roman and Byzantine thereafter, and then heritage was embraced by European and kindred Eastern Slavic (then Russian and Eurasian) civilizations through them that spread on a greater part of oecumene. Therefore the origins of these spiritual riches that contemporary civilizations of Europe, America and Oceania have should be traced in the culture of a small people of the island lost in the Mediterranean Sea that made a substantial contribution to the formation of a socio-cultural element of the genotype of civilization. What became a basis of this high culture still remains unclear.

**The sixth enigma:** Finally, the most racking enigma: *why the Minoan civilization demised?*

The archeologists and historians still argue about the reasons of such demise. Some believe that it is a gigantic wave arisen as a result of volcanic eruption on Santorini Island that carried away the Cretan kingdom. Others think that the reason of the loss of civilization was the intrusion of the Dorians like the inroad of barbarians ruined the powerful Western Roman Empire.

However, both these reasons after careful examination turn out invalid. According to **Logiadu-Platonos** «about 1450 B.C.

all centers of the Neopalatial period were ruined as a result of terrible consequences of volcanic eruption on Thera Island (Santorini). Only the Knossos Palace was revived and renovated so that to serve as the residence of the Achaean dynasty now»<sup>1</sup>. The Ancient Greek and linear written language spread as well as new artistic styles in the decoration of the Knossos Palace. According to Homer the fleet of Cretan king Idomeneus that numbered 80 vessels participated in the siege of Troy. Even after catastrophe about 1350 when none of former palaces was revived and the purely Greek period in the history of Crete began, the Minoan palaces survived on Crete — Kydonia, Polkodenia, Kistom, Knossos, Gortyna, Phaistos, Litt, Arcadia, Rethius etc. Life continued, but time came for other civilization — Cretan-Mycenaean. «A new civilization the origins of which were Minoan, however with inherent spirit of Greeks-Archeans showed the tendency to structuralism and stylization. Modest Mycenaean megalon replaced tricky buildings, the “Mycenaean koine” with its endless repetition of one and the same forms and simple design dominated in ceramics, the wall-painting lost its former ease and richness. The first waves of the Dorian tribes began to arrive to Crete as their coming is sporadically indicated by the advent of some new elements of material culture as cremation of corpses, iron arms and labor tools, fibulae evidencing a new fashion in clothes and geometric decorative motives»<sup>2</sup>.

According to Prof. **N. Platon's** periodization the history of the Minoan civilization lasts from 1100 B.C. which is followed by the Subminoan period (1100–1000 B.C.) that existed concurrently with the early geometrical period (1100–900 B.C.). The Minoan civilization of the first generation became a history transmitting its heritage to the classic Greek civilization of the second generation.

History knows a lot of example of fading away of local civilizations. These are civilizations of Sumerian and Elam of the first generation, Greek, Roman, Phoenician civilizations of the second generation, Byzantine and short-lived Mongolian civilization of the third generation. Before our eyes in the 90s of the 20<sup>th</sup> century a powerful Eurasian civilization that success-

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<sup>1</sup> *McNeil W.*, *ibid.*, p. 25

<sup>2</sup> *Ibid.*, p. 29.

fully opposed the western civilization fell down. Each time the reasons underlying the completion of life cycle of civilization, were various. In one case this was a military invasion (the loss of Carthage, American civilizations); in other natural ecological catastrophes; in third – the inroads of neighboring tribes and civilizations (Roman, and then the Byzantine civilization); in fourth – voluntarily disintegration (Eurasian civilization). But the main cause seems to be sought not outside, but inside civilization, in that passionary socio-cultural system that first will lead to the emergence, establishment and rise of civilization, and then to its crisis and fading away or after a transitional crisis state to a new revival (as it was not once with the Indian and Chinese civilizations).

*The regularity of cyclical dynamics of local civilizations manifests itself here, each in the original form and in various time passes through the stages of its life cycle – emergence, formation, maturity, crisis and fading – or in some time, a new emergence with the recurrent stages of a life cycle.*

Returning to the history of the Minoan civilization an assumption may be made that the Prepalatial period (2600–1900 B.C.) was the stage of its emergence, Protopalatial period (1900–1700 B.C.) – the stage of its establishment, Neopalatial period (1700–1350 B.C.) – the stage of maturity and rise, the Postpalatial period (1350–1100 B.C. and possibly from 1450 B.C. with the second catastrophe) – the stage of fading, the Subminoan period (1100–1000 B.C.) – the stage of fading, transmittance of heritage to civilizations of the next generation.

**And one more view.** Dialogue and interaction with other civilizations of the Mediterranean, exchange of material and cultural values that the Minoan civilization received as additional (rent) income in this region promoted the rise of the Minoan civilization. By the end of the 2<sup>nd</sup> millennium B.C. the leadership passed to the young, aggressive Greek civilization of the second generation that took over the leadership from the Minoans in this region and additional income related therewith.

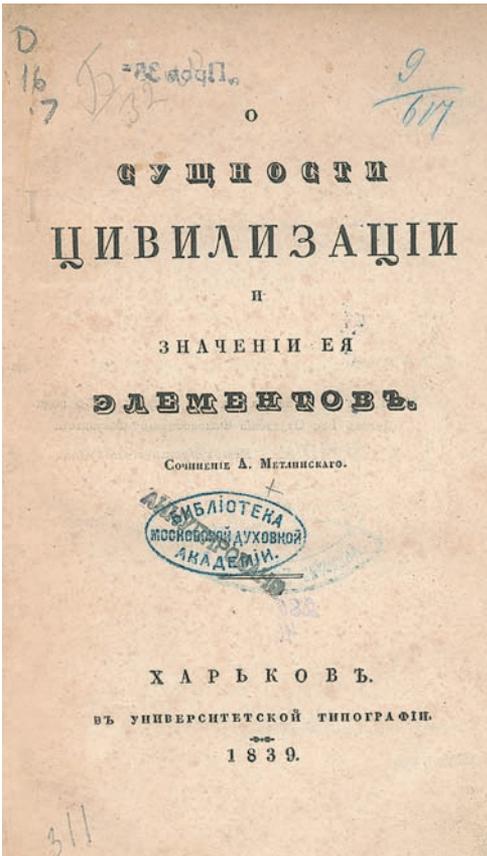
These are the six enigmas of the Minoan civilization. Answering to such enigmas through joint efforts of archeologists, historians and civiligraphers will allow casting new

light not only on the prime period of establishment and development of the first generations of local civilizations, but also disclosing the regularities of emergence, rise, crisis and disintegration of civilization of next generations, foreseeing the processes of civilizational development of the 21<sup>st</sup> century that has just begun.

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# Supplement 6

## THE FIRST BOOK ON THE THEORY OF CIVILIZATIONS



**W**hen working over the book we happened upon a unique edition that addresses the issues of the theory of civilizations. In 1839 a small research of Professor of the philosophical faculty of the University in Kharkov **A.L. Metlinsky** was published — «The Essence of Civilizations and Meaning of Its Elements». Although the works of French historian **Francois Guizot** (1787–1874) on the history of civilizations appeared a little earlier in Europe (1828–1830), however their major subject matter was the history of civilizations. In 1815 the guidebook on political economy written by First Russian Academician in Economy **A.K. Storch** was published in St. Petersburg (in French). This book included also a small section on the theory of civilizations. However, to the best of our knowledge the work of A. Metlinsky is the first advanced study on the theory of civilizations in the world. Therefore we've made a decision to incorporate it as a supplement to our book — the more especially as this work is not nearly known either in our country (the only mention of that book is one of the collection of scientific papers) or abroad.

Acquainting yourself with the work of A.L. Metlinsky an attentive reader will pay attention to the following points.

**First**, in determination of the essence of civilizations the author brings to the forefront using modern language a *spiritual sphere* — language and morals, development of religion, art, science and only then industry (where he also included farming, manufactory and trade, i.e. basically economy). This makes his approach absolutely different from liberal ideas, and later — Marxist theoreticians who recognized the priority of economy.

**Second**, in understanding of civilization the author proceeds from dynamics of society: «All human development, education and improvement both generated by public, achieved in society, possible under civism is social and civil improvement and it should be justly called civilization».

**Third**, making classification of the elements of civilization he brings to the forefront people — generation (this term as is used by A.L. Metlinsky not in a modern sense, but understanding it as a race),

language, character, morals and customs. Society — its organization (the best form of government is monarchy according to him), religion, art and science is on the second place in the work of the scholar. Several points should be highlighted here.

A.L. Metlinsky emphasizes the significance of *language as one of the fundamentals underlying the unity of civilizations* and peoples: «Language is one of the prime reasons driving and showing national development: it is an imprint of originality of its development, pledge of being of a national character, each step, each point hardly noticed of people's perfection accretes it, fixes and reflects in it; embracing alien language we embrace alien morals and concepts; destroying any national language, we dead some of the members of humanity; if the language is forgotten, then not only morals of the ancestry vanish, but the last current of original national vitality is dried up». In the modern theory of civilization little attention is undeservingly paid to the language. Meanwhile one of the challenges to the diversity of civilizations in the 21<sup>st</sup> c. is that the coarsened English language is enforced upon all civilizations and peoples through Internet and other mass media as a form of expression of western civilizational values. Such threat is really felt in modern Russia and other countries, especially among young generation. The fact that the Russian language has ceased to be the means of communication between nations and acquirement of the rich Russian culture is one of demonstrative signs that the north Eurasian civilization is disintegrating.

It is also worth to direct attention to another point of the book, especially topical against the attempts to establish the global empire headed by the only super power: «Life is movement, and welding all peoples into one political whole, we might terminate life, terminate the development of humanity. Each of peoples drawing together with all unity common to all humanity should show original perfection and in conditions of their area and nationality to cherish a beautiful flower of original national and independent development». The idea of the unity of global and diversity of local civilizations is, in effect, expressed here.

A.L. Metlinsky emphasizes the *common character of religion, art and science* in the spiritual development of civilization: «A spiritual side of development of society is expressed in religion, art and science; a physical side of social development is expressed in industry, farming, manufactory and trade; organization of society — government, administration and laws — as if a tie of soul and body in man, is the structure, distribution and connection of all elements of social development. Religion, art and science together were anciently conceived, existed

together and manifest themselves together to this day; but these elements developed and develop not at the same time, and hence there were the periods of concentration on one of them so to say all rays of human development». Indeed, in ancient Egypt and medieval civilization the priority was given to religion, in ancient Greece and the Renaissance — to art, in the Enlightenment and industrial civilization — to science. The future integral society as **P. Sorokin** forecasted will be able to reach a harmonious combination of these three beginnings of spiritual life of humanity, the unity of the Truth, Good and Beauty.

Obviously, the book reflects the level of knowledge of its period. But it is based on generalization up and development of civilizational ideas of foreign and Russian thinkers of that period. This work is not only the starting point in the formation of the modern theory of civilizations, but it somewhat enhances the prevailing ideas on their essence and structure. We expect that familiarization with the work of an outstanding Russian-Ukrainian scientist will help modern readers to understand better the essence and mechanisms of development of civilization — a higher and sophisticated social organism.

**A.L. Metlinsky**

## **About the Essence of Civilization and the Meaning of Its Elements**

### **POSTULATES**

Development and perfection are attributes and mission of man, society and humanity.

Development should be full both physical and moral.

Development and perfection of man and humanity are possible only through community.

Major elements of civilizations are: man, society and its actors and physical and moral development of man.

The significance of generations, languages and morals is immutable in civilizations of peoples.

The significance of the form of government is immutable in civilizations of peoples: the best form of government is monarchy.

The influence of religion in civilizations of peoples is also significant; Christianity is a wholesome religion.

The influence of art is also significant; the art of the ancient and the art of modern period differ sharply from each other.

The development of science is an attribute of New times; the influence of science and knowledge is significant and extensive.

The influence of industry is significant and extensive; each industry is productive.

The perfection of forces of man may be physical, moral and mental.

In the perfection of forces of man the moral direction of his activity is quite significant as the beginning and destination of human development.

**MAN, SOCIETY AND HUMANITY**

*Man* is the creature physical-moral and improving, the creature who has been called upon to this world for the greatest feat of self-development, elevated feat of self-improvement, holy feat of his manifestation, to his final being, although the sparkles of that endless all-round Perfection of which immortal spirit of man is reflection... Nevertheless, a fleshly organism of man ruins soon; and his spirit leaving the Earth, flies to the bosom of eternity from the work field of life. What is the destiny of the products of human being, products of a physical-moral activity of man, what is the destiny of a crumb of perfection accumulated by him? Is it spirit that will carry away this exiguous drop of individual human perfection to the ocean of eternal all-round Perfection? Is it body that will take this divine drop to the grave area of destruction?

No! It is needed for the world; it won't die for the world: *society*, as a sacramental ark-preserver, should float by the waves of the death, and it should gather from us and each of us should demise to it his activity, his, his development, and his improvement... Both man is caducous, and society is not everlasting: time has come, and it has done its time — its century, and it which is a general organism, complex of single organisms, disintegrates. So what? Will the undertakings of century, public work be buried in the urn of ruins? Will a general mass of personal activities, development and improvements, perfection of whole society, the glow of divine perfection go out? Moreover, a new society in the country where once the color of general life stood in splendor will pass by and just say — it used to be?!..

No! There is *humanity*. While people like myriad of leaves that fall in hosts down the tree of life in autumn and like ears in the field of grain are harvested by the sickle of death, while the flow of times and tempests of events rubs societies out, while humanity, general organism, complex of social organisms, despite evasion or nothingness of some of its members in the sphere of organic functions, despite disruption of deadening one and nascency of other, new — humanity lives, develops and improves; it improves and being led by the hand of Providence, ascends to the lofty purpose of perfection as complete as possible using various paths and by various degrees of improvement.

Even if the evidence of History was not complete enough in favor of a comfortable thought on the onward movement of humanity on the path of improvement, then the very necessity of such comfort in our mortal life would serve as a proof, sometimes stormy sometimes poor, the belief of great and virtuous men, noble hierarchy does at the altar

of science<sup>1</sup> would serve it... Let's quote the words of one of them, great servant of truth and beautiful word, noble **Herder**: «It's a great pity, to see in the revolutions on Earth only fragments on fragments, perpetual beginnings without endings, turnings of the fates without long-lasting perspectives! Only the chain of the formation makes these fragments onto unity, where although human beings disappear, human esprit lives undying and deedful. Glorious names, which glimmer in the culture as torches of the humankind, as bright stars in the night of the times! And let the flow of centuries destroy some of their buildings, let a lot of their treasures sink in the waters of forgetfulness; the work of their lives was not in vain: for if the Providence would save something of their work, it save this in other figures»<sup>2</sup>.

### Development

Whether it is already on the Earth man is to ascend the highest degree of perfection and to embrace by reason all kind of relations, inquire into the forces and phenomena of nature in their internal processes, comprehend the meaning of all and disclose all mystery of nature, quite possess the world, out sadness and disaster from the field of his being, and drain the cup of heavenly bless, full and pure? Or is a desire for perfection a great lever of human activity that should excite, move and enliven humanity in a mortal day of his mortal life, and incomplete delight on the earth to man is given in it and only forthcoming life after death should flourish in its complete perfection, should crown such desire as man's feat on the Earth: «For we all are here in a workshop, we all are the pupils»<sup>3</sup>.

These are guesses that excite man at the thought of improvement, but they have never left the sphere of guesses so far. Not entering the dark labyrinth of hypotheses, I'll turn to more essential subject, to the decision of the issue: in what could and should be human *development*?

The solution of this issue follows from the concept of man. Man is a physical-moral creature: the duality of the development inherent to him — physical, material and external, bodily development and moral, ethical-rational development, development of his reason and will, rational powers and activity forces, his spiritual nature — is based on such his duality. These two developments are in such relation with each other and in such mutual dependence that another causes one, another determines one, one cannot do failing another. **Guizot** who eloquently disclosed mutual dependence of development of rational-moral (of the «inner personality», of the humanity, of the man's inter-

nal nature) and physical and external development (of the social state, of the society, of the external conditions of man's being) has shown that History, voice of general opinion and the very essence of concepts speak in favor of mutual dependence of these two developments, «that the internal restructures itself according to the external as well as the external — according to the internal; that two sides of the civilization are tightly coupled; that the obstacles of different kind may get between them; that they may experience thousands of transformations to reunite; but that sooner or later they do unite; that it is a law of their nature, the main historical entity, instinctive belief of the mankind»<sup>4</sup>.

### **SOCIALITY**

Both society consists of a totality of estates, families and indivisible, and humanity consists of a totality of societies. The feat of human being is personal perfection of man, perfection of human societies and perfection of all humanity: but condition of all any human perfection is sociality; *sociality* is a form determined by a desire of humanity for the achievement of its feat: the development of both man and humanity is possible only under sociality in all its forms. Social nature is inherent to man, man is created to be social: as it is impossible to imagine not only his development outside its social state, but even his existence. If people grew wild were found, then such state was accidental, unnatural and a kind of unhealthy<sup>5</sup>; if you find the like people in society who borrow nothing from it, who produce nothing and leave nothing for it, then these deviations from a normal state not proving anything and not worth of pity.

Both people and societies should be in mutual connection between each other for development of their forces; such development continues not only under peaceful, but even under inimical relations of societies<sup>6</sup>. If there were periods that quite disappeared with the stock of its development, then they disappeared fruitless for it not transmitting anything to humanity; if any such societies that developed secluded and originally, and closed the wealth of such development on themselves, neither seek to collect the tribute of perfection common to all humanity nor share the gifts of their education with humanity, then it is suicidal for such societies and development of all humanity, fruitless deviations from general destination of humanity.

It is clear that failing social, failing relations between each other and failing mutual influence of personalities, social classes and whole societies, failing inheritance of improvements from already obsolete

generations and failing to will it for the benefit of the oncoming posterity, it is impossible a successful perfection of personalities, societies and humanity failing all this.

Thus: if development, education and perfection is a demand, feat and destination of human being, and if it is possible only under such sociality and in its forms then every human development, education and improvement both made by social and attained in society, possible under civism is social and civil improvement and it should be rightly called civilization.

### Opinions on Civilization

Let's consider several diverse opinions to comment on the concept of civilization. **Storch** has said most of all about civilization of all political economists<sup>7</sup> not speaking of those who represented civilization in successes of today's development of man. Nevertheless, he has partially mixed heterogeneous subjects and concepts and elucidating their relation to the industry formulated his own «Theory of Civilization»: «Health, skills, enlightenment, style, morals and manners, theopathy, security, leisure: that is what we call inner goods, civilization»<sup>8</sup>. Is it possible to include leisure and cognition, theopathy and style in one category? And what theory, what speculation placed these *inner goods* by system of their mutual relations and made a single organically harmonious whole of them so that they represent to us civilization and its elements in their mutual dependence?

After that we won't hide our head and take several words on civilization from «Abrégé de la Géographie par Balbi» as a collection of facts without any claims to the theory where hence the word in its current usage could be simply expressed. Saying that the reason of inaccuracy of many geographers in division of peoples into educated, barbarians and savages is from an incorrect view on their civilization **Balbi** writes: «Facts which we had an opportunity to gather and compare in our geographical and ethnographical researches and also a lot of conceptualized works have lead us to the following conclusion: that the notion of civilization must embrace religion, law, customs, morals and manners, government, way of living, social structure, arts and sciences, literature and language... that not only the levels of civilization, but also different types of civilizations are existing, that it is very difficult to define rather certain borderline between barbarity and civilization»<sup>9</sup>. The concept of civilization sound, but not harmonious in the citation, as a set of empirical information yet untouched by a constructive spirit of speculation: such concept of civilization is not quite

complete at that: whether the very man and development of physical-moral forces of man could be separated from civilization? Is it possible to include them in the number of the mentioned subjects?

Two writers — **Guizot** as the author of works «The History of Civilization in Europe» and **Rou Ferrand** as the author of the work «The History of Progress of Civilization in France» — are especially remarkable of all who have written significant works based on the concept of civilization, hence discussed this notion more and elucidated it more. Despite Guizot as if contradicted himself and in some places expressed himself not quite accurately, has contributed a lot to elucidation of the concept of civilization. Here are the concepts of prime significance he has said on this subject: «France have been the center of the European civilization. In some periods it has been out-run: in arts — by Italy, as regards the politic institutions — by England; it is possible that from other points of view there are other European countries surpassing France... Let us suppose that our language, the particular direction of our spirit, of our morals and manners, our pattern of thoughts appeared to be the most eminent for the masses... Civilization is a kind of ocean representing all richness of the people, holding in its belly all forces of the people's existing and putting these all together. In this main fact two facts are joined: the development of the social activity and that of the individual one... a) improving of the civil life, development of the society itself, relations between people: on the one hand, increasing of the labor needed and the welfare of the society, on the other hand the more equitable distribution of the labor and goods between individuals; b) development of the individual life, the inner progress of the man himself, of his abilities, of his senses and thoughts: letters, sciences and arts are flourishing in all their splendor, great men live and shine on the world's eyes... And the more the external conditions of man's life are developing, vivifying and improving, the more the inner nature of man snows itself in the splendor, in the grandeur, and the humankind is applauding and proclaiming the civilization»<sup>10</sup>. In order to quite disclose the opinion on civilization Guizot and his follower Rou Ferrand and explain once more that I have not deviated from the sense of this word recognized by savants in Europe should be traced by Guizot and Rou Ferrand in the very events of stated by them in the History of Civilizations. In the works of these writers the elements of civilizations are represented not in systematic harmony though, but split and scattered within chronological sequence, historical connection and at the authors' discretion.

Of all the said by our national writers about civilizations, let's quote a sound understanding of the translator of Dupont's work «on productive and trade forces of France». These are his words: «Despite all possible perplexities about translation «Civilisation» as *civism* or *civility* I've used the first as completely accordant with the subject... Civility is an external side of society and us; on the contrary, *enlightenment* expresses the immanence of human mind... these two elements are necessarily connected in real life and develop as a whole, and such development manifests itself in national civism... Civism embraces together practices and morals, notions and knowledge, arts and sciences, produce and riches<sup>11</sup>. «However, willing to avoid confusions I'll keep the word “civilization” as it is and as it is used by many»<sup>12</sup>.

One thing is left to note that none of the works shown by me makes any clear distinction between physical and moral development of man from manifestations and forms therewith of such development that includes for instance religion, art, industry etc. and the very human tribe is not decidedly included in the field of civilizations and it is also difficult to imagine and explain the elements of his development without it as well as the origin of natural products without knowing soil which generated them.

## ELEMENTS OF CIVILIZATION

Civilization is a physical-moral *development of man*, personal, social and common to all humanity under conditions of *sociality*; hence it follows the triality of elements of civilizations as their sphere includes: I. *man* as the subject to be developed; II. *society* and a totality of its actors; III. physical-moral *development* of man as a product of civilizational process.

Thus, the elements of civilizations are naturally arranged in such order: I. The subject to be developed — *people* in actual fact; this concept includes: 1. *generation*; 2. *language*; 3. *morals*. — II. Society as a form and condition of human development and improvement, and social figures of civilization: 1. *organization of society*; 2. *religion, art and science*; 3. *industry*. III. The very *improvement* of man, the end product of civilization, and namely: 1. *physical* development of man, its physical forces, abilities and manners, *mental* development of man, his mental forces, abilities and manners, *moral* development of man, his moral forces, abilities and manners<sup>13</sup>; 2. *morality* of man that manifests itself in feat of his activity towards improvement of himself, society and humanity<sup>14</sup>.

## **SIGNIFICANCE OF ELEMENTS OF CIVILIZATION**

Expanding the concept of civilization into its elements, I begin to clarify the significance of each of these elements<sup>15</sup>.

### **1. PEOPLE**

Man as a physical creature is subject to influence of external physical world; but on his side man affecting this world may change and adjust its influences to the attainment of his intents; he may direct these influences to the destination of his development. The dead cliffs and bogged lowlands are transformed into fields and pastures the same way; the areas of empty forests are replaced by luxurious gardens; animals putting into service to man are changed and take a new life; settlements, dawn of populous cities nascent in the coverts left by animals...

A mass of people connected by the unity of generation, language and morals is called *people*; however, the meaning of this word is manifold: such name is given both to a mass of people linked by one of the attributes referred to above and a mass of people consolidated in one political body through a single supreme authority. It might be said that there are various degrees of national character as well as various degrees of affinity and kinship in origins, languages, morals and customs of peoples; thus the nationalities of Slavic, German and French differ sharply from each other, they are more of national character and original with respect to each other than nationalities of the Norwegian and Dane, Czech and Russ, Italian and French. Numerous and various degree of nationality occurred because that heterogeneous masses are engaged in frequent and close relations, make a single political body and thus they become kindred unmeant; sometimes homogeneous mass is split, broken and separate, and then by lapse of time these separated masses become close and merge enriching each other through sharing original development acquired through a century original life of own nationality and activity that may occur to the tribes of the Slavic world.

Both there were people who thought about merger of human families of various nationalities into one political body, on vesting them with the unity of language etc., and there were other people that cared about division of countries and peoples into equal areas... Why didn't they have a look at the animal kingdom, plant and mineral worlds that develop in such beauty and harmony of their various unity? Microscopic manifestations of life are scattered near the giants of

Earth creations — and isn't foolish to say the cedar of Lebanon and ground grain: accept the only measure? To wish that an elephant and insect, sands and granite be compared and say to the flowers: choose one color? Life is movement, and welding all peoples in one political whole, we might terminate life, terminate the development of humanity...<sup>16</sup>. Each of peoples drawing closer to all unity common to all humanity should demonstrate both original perfection and in the conditions of locality and nationality cherish a beautiful flower of original national and independent development, express an idea to implement which it has been called upon to this world by Providence.

Strong and various influences on man's aspiration for perfection and on its achievement of perfection is in generation (race) of man, his language, his character, morals and customs.

## 1. Generation

Considering an extensive family of humanity, we'll discover many distinctive features in physical formation of its members; combining such distinctive features thereafter by similarity of prime of them into general characters we'll get several general types of physical formation of man. Each of such general characters that could be called *race* is subdivided into subordinate not such sharply distinctive characters of physical formation, generation (*rameau*) equally as the generations are divided into tribes (*variété*). However, the accuracy is not always observed in such terms as their meaning has not established itself yet. According to the naturalists if most long-term and strongest influences are unable to make such sharp distinctions that is traced in the nature of bodily formation of various human races<sup>17</sup> then these cancellations of physical formation of humanity occurred perhaps already in those times when our young earth strongly simmered with the higher level of vital force, when having the higher level of creativity it created, destroyed and created anew whole worlds of creatures<sup>18</sup>; hence it could a stronger and more decisive influence on physical formation of man. As for the unity of the origin of human kind then the naturalists adduce as an example the ability of all human races, generations and tribes to produce fertile crossovers.

**Cuvier**<sup>19</sup>, **Lesson**<sup>20</sup>, **Link**<sup>21</sup>, **Lacépède**<sup>22</sup> and other natural scientists adopted the division of human kind into three major races: 1. White or Caucasus, 2. Yellow or Mongolian, 3. Black or Ethiopian<sup>23</sup>. The facial angle of Kampffer denoting a relation of the size of forehead and size of jaws and a bulging lower part of the face and distinguishing the head and the face of man from those parts of the body of apes and other ani-

mals and according to some people it determines the very perfection of man, this facial angle is different in each of three human races: in White from 85 to 80, in Yellow from 80 to 75, in Black from 75 to 70°.

Let's have a look at the distinctive properties of a physical formation of major human races and their division into generations and tribes<sup>24</sup>. I. The White or Caucasus race is remarkable, according to the Europeans, for their regular bodily shapes: the head is oval, facial angle to 85°, white skin, ruddiness cheeks, long and soft hair from dark to light color. This race includes the following generations and tribes: 1. Aramaic: Assyrians, Chaldeans, Arabians, Phoenician, Jews, Abyssians and, perhaps, Egyptians; 2. Indo-German and Pelagic; 3. Scytho-Tartarian: Scythes, Parthians, Turks, Finns and Hungarians; a) tribe (*variété*) Malaysian who occupied the Indian archipelago and settled from Madagascar to the Philippine islands and from Malacca to the Papuan lands; b) Oceanic tribe that is a branch of the great Indian generation and settled in the countries of Oceania to the Sandwich Islands to New Zealand. II. Mongolian race; its distinctive features are: flat face, prominent cheekbones, narrow eyes, black and straight hair, sparse beard, olive color of skin, angle to 80°. The generations and tribes of this race: 1. The Manchu generation that includes the residents of Bukhara, Dauria and that settled from the Caspian Sea to Japan; 2. Chinese, residents of China and Japan; 3. Eskimoan: Laplander, Eskimo, Samoeds (Sami), residents of the Northwestern coast of America and the Kurilles and the Aleutians; 4. American that includes native Americans that are divided into several separate tribes; 5. Carolinian that populates the archipelago of the Carolines. III. The Black or Ethiopian race; its distinctive features in the physical formation of such race are: jaws are strongly prominent, black color of skin, more or less rough and short hair, disordered, thick lips, facial angle to 75°. Its generations and tribes: 1. Ethiopian generation; residents of Senegal, Guinea, Congo etc.; 2. Kaffir that populates the southern end of Africa, its eastern coast and a part of Madagascar; 3. Hottentot generation that resides near the Cape of Good Hope; 4. Papuans that inhabit the Papuans Islands, New Caledonia, the Hebrides, New Ireland and archipelago of the Solomon Islands; 5, 6 and 7. Generations: Tasmanian, Alfiru-Andamans and Alfiru-Australian to which belong the inhabitants of the Diomen Land, a part of Madagascar and New Holland.

It stands out from this overview of races, generations and tribes that the White race is found in all climates of the Northern hemisphere; the Black race stretched from the West to the East to the

south from the White race; the Yellow race engirt a wide fringe like the White and Black tribes.

If we turn now to history and ask it: whether such division of human kind into races had sense, whether it had influence on the course and successes of human development? Then the history will supply proofs to us and a doubtless significance of races of humanity with respect to its development will open up. It will say to us that the tribes of the Caucasus race were and remain the major keepers and administrators of significant earnestness and ways of human development during about forty centuries that they demonstrate the examples of the strongest desire for perfection and rapid successes in perfection and that these tribes extended its influence on all peoples and expanded it on all parts of the earth and they first embraced through discerning eyes all generations of humanity. It will tell us that the Yellow race formed extensive and strong empires of China and Japan in Asia and developed its formation to certain perfection in some respects; but certain stagnation, disunity and its remoteness from other generations of humanity has been always observed. It will tell us that the Black race, split and disunited, has been always on a lower level of development and even ill fame that it managed to spread in ancient times through its terror of devastative inroads into the countries of other people<sup>25</sup>, and this fame has finally simmered down, ceased and vanished... that this is a race in the half-educated times deemed not to be worth of human name though with a good reason for that and deprived of the human feelings, created for slavery; it sold and is now ready to sell a father and brother, wife and son for several European trifles.

Thus, both the nature of physical formation of various human generations where in one it is traced the inclination towards brutality, in others spirituality overrides<sup>26</sup> and the voice of History drives us to the finding in concord that bodily formation of human races expresses the inequality of their inclination to the capacity for development, education and perfection. It is worthy of note that although there were no examples when the White transformed into the Black and vice versa, however the most Black tribes that are higher on the level of civility are somewhat closer to the formation of the Caucasian race<sup>27</sup> in certain features of bodily formation.

## **2. Language**

Prior to the development of social bonds a special language is nascent in each country, each coast and each valley: therefore their number is immense; but as people become close, entering into often and

close mutual relations, their languages merge into separate masses. However, it happens often that when social bonds are discontinued, homogeneous tissues of languages fall apart, and these parts are scattered by separate life and development of peoples or change and become mixed through tangs of languages of other human tribes.

Through thinking man brings to his consciousness the ideas of objective reality, external being; through words an intimate matters of inner man is expressed externally; through thinking material world entering the area of human conscious, is merged with the spiritual world of man; through word a thought of man is issued into the outer world and as if externalized; it may be said that thought is inner, intimate, secret words of our spirit; the word is sensual embodiment of our thought: that's why they are inseparably connected. The difference of languages is determined by the existence of the very things and its various apperception resultant from it as well as reflection in the sphere of human spirit. But like sowing grains on various soils may grow differently through such difference of soils, then the apprehension of the contents by thought with all its sameness, may be apperceived differently based on the individuality of human spirit existing and acting in the conditions of the outer world and bodily organism. Each human generation is in a definite sense a reflection and embodiment of the country on the Earth where it is formed; the judgment of man about things and his activity with respect to such things is based not only that these things in their essence that they are things-in-themselves (*an sich*), but also that they are things-for-themselves (*für sich*), what is required from such things and what is given by them, where they are placed and what is anticipated from them. Thus, the difference of human languages is based both on the individuality of man, in various countries and generations and on the difference of things and their relations to man. The reason of various *degrees* of difference in languages, dialects and idiom<sup>28</sup> is in various *shadows* of commented influences.

Willing to accept the viewpoint where the chaos of immense and immeasurable wealth of human languages would at least interlocked, **Fr. Städler**<sup>29</sup> attempted to represent a totality of all languages in the form pyramid structure consisting of three steps. The foundation or the first step of such pyramid structure should be occupied by the languages mostly formed from monosyllabic, radical words that do not have grammar at all as the Chinese language or that has only first rudiments of extremely simple and imperfect grammatical formation. The languages of this order are spread, except Europe, in all four parts of the world. This is a degree of infancy of the language; as the first lisp-

ing of a baby begins from the monosyllable sounds. In this sphere of languages, the Chinese language may be deemed most significant and most remarkable: the nature of perfect monosyllabic language with no grammar has expressed most in it, but at the same time the Chinese language has developed and improved as far as possible for the languages of such formation; the original nature of infancy in the language of Chinese is obvious, but it assumed quite conditional direction through artificial writing of letters and development of the notions of language. The families of the following languages, manifold and noticeable formation connected between each other should be on the second step of the pyramid structure: Indo-Persian, Greco-Latin, Gothic-German and Slavic. The radical words here are at least disyllabic mostly and getting a special movement therethrough they serve as a source of affluent grammatical development. A distinctive feature of these languages is extremely artificial, even in the original formation of language grammar and completeness of representative forms and equally the accuracy of terminological nuances. The top or the third step of the pyramid structure should be occupied by the Semitic languages: Jewish and Arabic. The staple of these languages is that all radical words are trisyllabic, and each of three letters of the radix is deemed a syllable and pronounced as a syllable. According to the word-composing law the verb occupies the first place here and everything originates from it and this attaches to the expression of languages something rapid, full of fiery life. Neither such extensive grammatical development nor such artificial grammatical structure can be in the Semitic languages and it is impossible to attain either such poetic diversity or terminological flexibility as in the languages of the second order; their prevailing nature is trend to lyricism and depth of symbolic significance.

If we take another base, another division of human languages may be found. The external world of *things* as a reflection of human *spirit* is in the languages; the division of the language is deduced from relation of these two sides in the languages what tips the balance the external world or the forming spirit: *natural* and *formed*<sup>30</sup>. I. The field of the first languages includes the languages of the Black and White races spread in Middle and North Africa, in North and Eastern-Central Asia, on the islands of Oceania and in the countries of the American indigenes. II. In the field of the formed languages where the force of creative-forming spirit is manifested itself over rough objective external world, the languages of the White race spread throughout Europe, Southern and Western-Central Asia, America and northern parts of

Africa and also some islands of Oceania should be included and such languages make the three steps of development – material, formal and ideal – as one organic whole. Therefore the languages of the Caucasus race are divided into the languages of the Eastern formation, Classic languages and languages of Christian formation: the first includes the languages of the West-Central Asia and South Asia, Turkey and North Africa; the second – Greek and Latin; the third – Roman, German and the languages of the Slavic world. Thus: I. Natural languages. The manifold and diversified sounds that are produced involuntarily and unconsciously by sensualism set adrift to the exterior. II. Formed languages. A. The Eastern formation. Here religion indicated super worldly and exterior lost its immediate worth; something different was suspected, recognized and honored in it than it was; it was viewed as a symbol of something supreme and hence something symbolic, figurative, and allegorical; spirit began to generate notions, give a firm form to the sound of voice and create a word in full sense. B. Classic. The desire of the Ancient world was directed towards making the form nearly in all aspects as concord and congruity of a sensual notion with thing; as plastic art tried to express completely endless and boundless in the bounded and final, than the language tried to express the subject, essence and contents through its definite forms not only with respect to changes of words, but also combining of words. C. The new time, Christian flourished on the ruins of Antiquity and its languages are known as Contemporary; the attributes of Contemporary languages – the richness of words, their multi-dimension and accuracy are attributes necessary for expressing the truths of science, for complete development of human thought, for expression of all manifestations of human spirit<sup>31</sup>.

However, according to the comment of **Schlegel** the division of languages is useful in that respect that one general thread, one viewpoint is ensued for the entire totality of languages; but the development of human spirit disclosed by languages is such abundant, changeable and manifold as the emergence of life in its free nature: hence there are many transitions and deviations in human languages that are difficult to include in any kind of classes.

A word originates through reflection of the external world in man; therefore external world of things, internal spirit of man and his physical organism are brought to mutual contact and relation in the word; therefore the language is in a certain dependence on generations of man and his nature, morals and customs – and its influence extends to all manifestations of social life of man.

A word depends on human generations; as a physical mean of expression of thought, language is in connection with a bodily organism of man. Otherwise, how could we explain intolerance of certain sounds in the languages of certain tribes, attachment to certain sounds in the languages of other tribes? Palatalization and tenderness of one sounds in their languages, firmness and severity in the languages of others? It is known that the Black or Chinese can't articulate sound «r» and that such sounds are seldom used in the languages of the Malaysians and the Caribs; that the letter «i» is seldom occurred in the languages of the Persians and Arabians as well as the letters «f», «l», «r» in the languages of Brazil, Canada and Japan and «b», «g», «d», «j», «i» and «f» in the languages of Peru and then when borrowing from the Icelandic to German «p» becomes «f», and «f» becomes «b» and in the borrowings from the Great Russian to the Southern Russian «e» is changed to «i», «f» becomes «hv» and «l» often turns into «v» etc.<sup>32</sup> Beside a generally known influence of the character of man on all its actions, style and language, let's also recall how the language of militant Dorians was different from the language of peaceful-artistic Ionians, how often the practice to pronounce a letter of this or that way colors the language of city residents and villagers, language of this or that estate and order of people; let's recall what else influence should custom of certain peoples to pierce lips and decorate them render on the language.

The influence of language extends to all manifestations of social life of man, and in particular: a) religion, b) art and c) science, d) industry and e) organization of society. a) Regarding religion: language is a keeper and interpreter of its covenants; it is heard in the lofty hymns of church service, in conversations of man with God, in the verbs of God to man; those people are happy where the language of ancestors engraved by antiquity and as religion itself is unchanged may serve as an overseer of the inviolability of religious dogmas. b) Regarding the enlightenment. A word and thought are in such close relation with each other that enriching the language we develop the notions thereby and vice versa. A too fast change of language made unclear the works of old people minds, it may make the descendants aliens to the thoughtways, notions and feelings of the time of its past; the scholars draping a mantle of the ancient design around their language may produce a separate bookish language and deprive other classes of society of the opportunity to borrow the fruit of enlightenment. The usage of the alien language by certain people shedding false lustre of education on them in the eyes of other people and own eyes may exclude their wish and a need for essential education; not knowing the languages of

the aliens it is impossible to know completely their character, life and education. c) Regarding arts. No matter how powerful and free is a creative spirit of an artist, but the manifestations of his ideas is in the physical world and therefore they depend on the material manifesting them and hence expressed in the architecture in a known way, and it will manifest itself a different way in sculpture, a different way in painting and music and therefore a thought expressed by a poet in the language known to him only can't be easily rendered in other languages. In poetry a graceful idea should be inseparable with an elegant form, but not all languages are equally able to express elegance: the languages of the German and the languages of the Slavic, perhaps, have outperformed the algebraic language of France in this regard. d) Regarding industry: spread and learning languages making closer both higher and lower classes of peoples serves for the benefit of the spread of industry, familiarize with foreign practices and various ways to sale goods. e) Regarding organization of society: the usage of the alien language by the government disuniting it with people can't produce mutual strong sympathy; different language of estates and governmental parts can't but create a certain alienation between them; language serves a mean and measure of mutual influence of peoples. So the language is one of its prime springs driving and manifesting development of people: it is an imprint of originality, a guarantee of national being, makes a firm union with it, each step, each barely noticeable point of people's perfection are reflected through it; accepting an alien language we accept alien morals and concepts; destroying any national language we make dead any of members of humanity; if language is forgotten, it means than not only morals and notions of ancestors vanished, but the last jet of original national vitality is dried out.

### **3. Character, Morals and Customs**

The character of man, spirit of its activity depends on man's physical organism; morals of man, a mode of his activity are approved by generally accepted rules established long ago, approved by life, habits and character of man; customs of man, forms of his activity are established by external accidental circumstances, morals and nature of man.

#### **A. Character**

It is observed that the acts of man depend not only on his temper at the lowest degree of education, but more on the influence of external occasionalities and he has not any character in him; at the highest degree of education a spirit of human activity is determined by a free

will of man more than the kind of his temper; but the acts are never so obeyed to the temper of a physical organism of man as they are at the middle step of its education<sup>33</sup>.

The character of people depends on what kind of temper is more widely-spread with people. A phlegmatic temper, according to **Virey**<sup>34</sup>, is similar with the age of childhood and how it is damp, sleepy, heavy, gluttonous, inactive, stupid, unable to ardor, receiving long-lasting and deep impressions; sanguine temper is close to the age of youth and its signs are the same as with the youth: liveliness, flexibility, changeability, self-forgetfulness, leaning to sensuality and pleasure, joviality, loquacity, curiosity and spendthrift; a choleric temper is similar to the perfect major age and it could be observed – ardor, strength, irascibility and short fuse, enterprise, intensity of passions and fire and fury of love, senses of pride and high feelings; melancholic temper has signs of old age and as well as in it the following could be observed – stringency in all movements, dry and steel muscles, cold reason, forethought in desires, discretion, circumspection and even distrust, mood is sad, gloomy, secretive, far-seeing and fearful.

The influence of tempers tells not only on the nature of man's behavior, but in the nature of his language and style: the style of phlegmatic people is flat, heavy and dull; sanguine temper is unthinking, colorific and wordy; choleric is fast, flashy, strong, overbold and cruel; melancholic is dark, compressed, deep and strong.

It is also observed that the inhabitants of cold countries phlegmatic-sanguinic temper occurs more often, in hot countries – melancholic and in moderate countries – choleric. However, both in individuals and in whole tribes none of tempers occurs absolutely clear; and because of a mix of various tempers lots of shades in characters of both individuals and peoples occur.

## **B. Morals**

Morals are the essence of the foundation, laws and rules of our activity generated and established by life itself, authorized by force of general opinion, implanted by habit.

Morals and laws are in close mutual connection and obeyed to a strong mutual influence<sup>35</sup> and the lawgiver complies with people's morals, if he wants that his laws are based on a solid foundation<sup>36</sup> and even with the purpose to change morals, he should act gently so that not undermine morals at all not replaceable by laws, so that not to make the laws in obvious contradiction with people's morals and thus not to give rise to disarrangement and destruction of society.

Both the influence of good morals on laws is wholesome, and on the contrary the influence of vicious morals is detrimental. As first the laws originating from authorities whether at the people's assembly, Senate or represented by the lawmaker, these authorities are held subject to the morals of their representatives; second, as social laws are implemented by society members, then if morals are good and mild, the most cruel laws are eased and vice versa if the morals are depraved and vicious, then the best laws failing their objective remain void.

But the dependence of laws on morals and the influence of morals on laws are as they are is it evil or good? If it is correct that established bad morals become sometimes a hindrance to the most right-minded law-maker then one can't but assume that acting gradually and judiciously it is possible to eradicate bad in morals; that the morals of peoples originating from their life are given to them as if for protection and securance against laws not inherent in them; that moral infiltrating throughout people's life is a necessary complement of laws. Many evade using the meanders known to them from the law spreading its influence through the persons appointed by the government, they bail out themselves by the way known to them, force through by the ways known to them; such evasion I'd say is nearly impossible, at least very difficult, from morals permeating all structures of society, the voice of which is heard in all cases and under all living circumstances, the judges and the executors of the sentences are in the heart of families and public forums, in the bosom of near and dear and secular assemblies. Hence wounds from a breach of laws in society bad as it is, they could be still cured but if it people morals are already impotent and if they are violated without shame and terror then society invites imminent destruction.

### **C. Customs**

Customs are the forms of manifold day-to-day practices; customs especially manifest themselves in the way of living, food and drinks, in clothes, homes, pastime, entertainments etc.

*Way of life.* Is it meant primarily under the way of life whether people lead nomadic life or permanent dwellings. As the development of man and society depend on such ways of life quite a lot. In case of the first way of life that is sometimes imposed as if certain fetters by the area they live in, the development of man and society is possible to a rather limited degree; and vice versa in case of permanent dwellings a favorable opportunity may fast bring the people out from the state of dark ignorance to a high level of education<sup>37</sup>.

*Food and drinks.* The influence of means and ways of nutrition on man was already noticed in high antiquity, and by way of proof one could adduce that they did not escape attention of nearly all religious law-makers. In terms of formation of its digestive organs<sup>38</sup> man occupies the mid-place between the carnivore and the herbivore enjoys in a manner the right to taste all the kingdoms of earth nature; such versatility of a human taste that incites man to seek out all, to keep all and to convert everything for his benefit and expand the area of his perception, makes him the true king of nature. One of the naturalists<sup>39</sup> tried to prove that a herbivorous nature of man to his carnivorous nature match up 12 for 8; but such proportion equally as the quantity of food depends on numerous circumstances featuring climate, times of year, education etc. In cold countries and cold times of the year food is mostly consumed from the animal kingdom and in large quantities; in warm countries and in warm times of year — mostly from the vegetable kingdom and in lesser quantities<sup>40</sup>. The residents of some countries should live on catching animals, some — grazing livestock and other fishing and some — to win their daily bread from fruits of the earth. Some prosperity is always maintained with educated peoples and in the well-to-do countries in all classes in means of nutrition: therefore the residents of these countries accustom themselves to a certain degree of moderation; in the dark countries and in a herd of savage men there is perpetual emotion between surfeit and poverty in the means of nutrition accustom a resident to content himself at one moment with a trifling quantity of food, at another to eat away enormous quantities of fare<sup>41</sup>. The educated peoples consume more nutritive and better cooked food; a savage man contents himself with rough and less nutritive food. The activity and health of man is in close connection with food consumed by him. Hard liquors being partially salutary for the residents of cold countries are baneful to the residents of warm countries.

*Dwellings and clothes.* With the level of education of man his independence from external influence increases as well as his dominance over the outside world. This tells both on dwellings and clothes of peoples on the various level of development. The residents of undereducated countries who are driven by hostile force of the elements either shelter themselves in holes, caves and couches like animals or nest in trees like birds; either spend nearly all their lives on boats or hustled in movable shelters and wagons; their solitudes are limited to a day-to-day life and not extend to future and the traces of their existence disappear as fast from the world as concerns of a passing day disappear

from their soul. On the contrary, all conveniences for a physical-moral development are combined in the dwellings of educated peoples; it is traced the negotiation of forces of the outside world in such dwellings, curbing of hostile natural influences, dominance over climate and temperature; it is traced the aspiration for dominating over materialism of physical convenience in the dwelling of educated people, to reach the ideal of beautiful and noble, develop material into magnificent buildings and decorate the earth by them and eternize their memory. The residents of cold countries use clothes from the products of the animal kingdom; the residents of warm countries use the clothes from the products of the vegetable kingdom; the residents of moderate countries dress themselves in clothes made from the products of both the vegetable and animal kingdoms. Clothes are narrow, able to keep the body of man in the warmth and convenient for fast movements; wide clothes are convenient in warm air and decent in pompous and dignified movements: hence the first is used in cold climates, in countries of active Europe, for workers and military men, the second — in hot climates in the East, in the clerical orders. Furthermore, the clothes are the sign distinguishing various classes and orders of society from each other and various decorations, forms of honor, signs of dignities included in this field serve sometimes as impellents to accomplish prime feats.

*Pastime, amusements etc.* Custom extends on the ways of pastime, amusements, mode of pronunciation of words, external signs of respect etc. Who won't agree that dances, cards, theaters, literary soirees, tattoos and similar customs of the savage, fashionable way of pronouncing words remain without a strong influence of man and society?

In closing let's observe that morals often serve instead of laws that the source of feudalism hanging over Europe is in moral of the German peoples and that the state of the woman in the East is one of the reasons of its despotism in the way of government<sup>42</sup>; let's observe that a national character affected the revolutions of England and France; let's finally observe that the Great Reformer of Russia knew for sure what power is resident in customs when he persisted in their changing applying all the might of his inflexible will.

## **II. SOCIETY**

Society is a fact that can't be separated from man, it is impossible to imagine either the advent of man in the world or his being in the

world without it as well as its development. But how many transitions from the original germ of society, from its pro-formation in the bosom of family to a correct state organism! The state transformed after state as if the coat of leaves of a plant until a grand trunk of the state life was crowned by a beautiful flower of education. And now still on the Earth we witness as if a living History of society, various states and ages of human societies through which one already passed through long ago, others should still be passing through with time. At the first stages of social development people usually accumulate on the coasts of large rivers which with the abundance of fish are enough to feed the inhabitants of coastal areas and the very vegetation of the shoreland watered by moisture is living, abundant and luxurious. Fishing taught man to swim at first, sharpened his wits and fostered its courage in battles with storm. Then perhaps man ventured to go to the woods and steppes and the giant catcher joint the battle with beasts, strong and fierce, their inhabitants and kings, he tamed down ones and hounded out others. Depending partially on the locality man remained a savage — entrapper in forests or nomad-shepherd in steppes longer or shorter. In that time perhaps man attained a lot in the field of nature, many natural forces converted into his tributaries and servants and using them he went further and further by the path of education; in that time the attacks of fellow creatures made tribes to unite under the leadership of strongest, boldest and smartest; man was amazed by fabulous phenomena in the field of nature and aware the being and force of the Great Spirit; on an impulse man manifested an extraordinary enjoyment of extraordinary liveliness of movement, various modulations of voice etc. — signs were invented for keeping events in mind, images were cut, etc. The long and the short of it is that organization of society and industry, religious, art and knowledge as if in the germ desirous to develop, are included in the original dawn of society — included already before man turned to husbandry and settled way of life, knew the land property and developed a firm state organization.

A spiritual side of development of society is expressed in religion, art and science, physical side of social development is expressed in the industry, farming, manufactory and trade; organization of society — government, administration and laws are as if connection of soul with a body in man; an arrangement, distribution and connection of all elements of social development.

Religion, art and science were inchoated together in ancient times, existed together and are manifesting themselves together now; but these elements developed and are developing not at one time and

therefore there were periods of concentration on only one of them one might say of all beams of human development. Religion developed first and embraced humanity and cherished it like a baby; arts appeared then and continued education of man; then science joint and girded up the maturity of man by force and crowned him by perfection. As man developed though, all these elements perfected so that religion of our times is the perfection of religion of previous times, and the art of our times is the perfection of the art of previous times, although human education is not exclusively concentrated in either religion or art of out times. The first religion was monotheism; but man, powerless yet, ascended by thought to an abstract notion of God tracing God in the universe as an artist in his doing, imaging the universe the symbol of God, gazing him in sensual images and... finally sank into pantheism. Sabaism and fetishism could be viewed as embodied, rude and senseless remains of pantheism that lost its comprehensive thought and its meaningful generality. A host of living gods endued with an individual originality was formed on rude and lifeless ruins of pantheism under successes of human development, the Greco-Roman polytheism formed. In the world of polytheism, symbols and myths mirroring in the earthly unearthly, they descended to the earth and lost force and depth of mysterious meaning<sup>43</sup>, but then expressed in beautiful forms of classicism and developed an elevated gift of man into the art; as it was the seasonable hour of art. Time came for the development of science and the Supreme favored the enlightenment of man, and man was honored with to accept the lamp of the Divine Religion from the hand of the Supreme. The development of religion began from the unity and it ended with the unity; but as far as God is higher than his creature so far that first unity was lower than that latter.

From a spiritual side of society referring to the development of its organization, from the field of an absolute family rule we'll enter directly the field of despotism; as despotism is the same in the government as pantheism in religion; the unity is as if expressed in it, but splitting the supreme authority and making each favorite and each satrap sovereign not concentrating social life is only a sign of the unity, but not the unity proper; the omnipotence is as if expressed in it, but not penetrating into the life of society and not extending its influence to all its fields and which influence is precluded by despotism of each satrapy, each family and swinging by changeable wind of arbitrariness it is an insignificant being of the pantheistic god. In despotism, fear is a spring of social movement<sup>44</sup>, but this is not a fear of breaking a duty, reasonable and willful, not a fear of knowledge and

respect of legal relations, this is a blind and blank, unclear and uncertain fear of pantheism for which God, except the real God, all is duty, except real duty, all is terror, except just terror. As in polytheism of the Greco-Roman world, the dead of pantheism is revived, divine one might say is humanized, becomes the subject of art: thus in the republics of this world social life of humanity, leaving the dead in pantheism moves, is agitated and revived; the supreme authority as if descended to the earth and appeared in the hands of the profane; doings are solved in fair speeches, and the memory of society is eternized in beautiful social works; the spring of social movement is a feeling, is a fervent, juvenile, heavenly aspiration to reach great, noble and beautiful. Like the world falls into two parts in polytheism: the animate world of human-like gods and god-like people and into the soulless world, society also falls into two parts in the republics: the animate world exalted by the power of citizens and authorities sunk to citizens and the soulless world of slaves. In monarchism, there is legal, reasonable, conscious unity the unity which influence extends to all movements of social life — force based on the right and law, necessary relations of the subjects themselves. In monarchies, a spring of vital activity of society is the idea about duty and honor based on knowledge and respect mutual relations of man, society and humankind.

In the process of development of industry it appears that there is the same graduality of transitions from the original roughness of materialism to the field of the domination of spirit. In the families there is as if not developed germ of industry, combination of all industries. In societies, industry begins from farming: all outside world is subject to such industry, but man is too subordinated to the influence of soulless forces of nature there. Then the adaptation of works to satisfaction of needs begins, cultivating of their forms, transformation after taking: this is a period when art forms, industry corresponding to art. Finally, industry that concentrates all works of activity of nature and activity of man, appears, trade — the highest degree of industry, the crown of its development.

## **1. Organization of Society**

The organization of society is the way it is governed. As the way of how it is governed is the same as form organization of the body for man and for a ship the connection and arrangement of its parts: as the form of diet depends on the physical organism of man and as the way of maneuvering depends on the design of a ship, then the government of society and its laws<sup>45</sup> depend on the

mode of its administration and Pope's phrase:

*Let fools discept on forms of government,  
The best administered is the best, –*

is hardly valid.

**Montesquieu**<sup>46</sup> distinguished three forms of government: republican where the whole people or a part of people is governed in the supreme way; monarchic where the only one governs based on established laws; despotic where the only one governs without law and without rule and everybody is carried away by his will and arbitrariness. Other<sup>47</sup> according as the supreme authority is in the hands of one or many distinguished three following forms of government: monarchic, aristocratic and democratic. **Kant** (and his followers after) distinguished the forms of government based on the rights of the subjects: a) the subjects are deprived of personal and political rights – despotic government; b) the subjects enjoy personal rights not having political – monarchy; c) the subjects are not deprived of either personal or political rights – constitution and republic. Taking into account not only the form of external representation (*arche*), but also the form of internal organization (*kratia*) of the supreme authority and leaving despotic government and changing the old terminology **Krug**<sup>48</sup> expressed the forms of government as follows:

- a) autocratic monarchy;
- b) syncratic monarchy;
- c) autocratic polyarchie;
- d) syncratic polyarchie.

However, according to Montesquieu let's note that in actual fact one can't rarely meet the forms of government in its pure and separate as they are shown in the theory; but each of them bordering more or less on this or that form is mixed with other.

The influence of social organization extends to: a) generations; b) languages and c) industry; d) religion, art and science and e) industry. a. Regarding generations: despotism with all its members from various tribes has to make one of them the master and the oppressor of the other; in republics, such belonging to various tribes should be the dawn of the irreconcilability of the parties; monarchism, stating the legality of relations and appeasing personal passions, is the only that is able to merge several generations into one brotherly union. b) Regarding language: more energy is traced in the languages of republics, in the languages of despotic governments – servility, in the languages of monarchies – legal forms of politeness (*suum cuique*).

c) Regarding morals: the despotic government introduces the spirit of arbitrariness and violence in all relations of citizens and the very bosom of family; absorbing in social life all human life republic introduces the relaxation of family ties and negligence of family relations in private life — the life of the Athenian took place at the public forums, theaters, public assemblies etc.<sup>49</sup>; in the monarchy everything depends on law originating from the one divine principle and therefore the rights of all are balanced, the rules of morals tend to establish themselves on the legality of relations and therefore it could make happy all classes, states and titles of society. d) Regarding religion, art and science: despotism is in the worst way possible favorable to religion, science and art; republicanism is suspicious and wayward, calling a thinker and artist for its delight and spilling people's applauses to them, however enviously and hostile looking at their forces, destroying shabby tissues of equality and introduce republic to the world of religion; patronizing religion, art and science and settling peace and quietness, monarchism is the form of social organization most favorable for spiritual development of man. e) The securing of property and social quietness are necessary conditions for development of industry and incompatible either with despotism or republicanism are an integral attribute of monarchism.

The purpose of people's union into society is a cumulative, social, successful aspiration to reach the highest degrees of perfection; hence society is closer to the point of its destination the closer its members are connected between each other and held together, the more power is concentrated and spread, the more one might say the power and the subjects are mutually permeated. In despotism, the power of government that has no a permanent point of support and direction and the scattered will of government are powerless; the forces of society separated by the hostility of fear, are void and the union of society, forcible, is undurable. In democracy, the struggle and commotion of society may contribute to the fast development of forces; but the dealings of accusation, exilement, anarchy originating from the nature of crowd, jealous and envious, thankless, changeable and suspicious by attenuating society, should bring it to the hands of neighboring conquerors or embraces of the dying monarchist. Aristocracy not causing fast development is not that driving and rebel, it is not so subject to anarchy and dismissing overthrows assumes the nature of permanence; but then the spirit of caste keeps the majority in the darkness of ignorance and depress by the yoke of slavery until first secretly boiling spirit of dissatisfaction breaks through and throw off the burdensome

yoke. The monarchic form of government concentrating social forces, connecting society members through the legality of relations, safeguarding the rights of each is an ideal of social organization and under its shade Christian Europe has flourished.

## **2. Religion, Art and Science**

The perfection of physical man, his physical body, the perfection of his feelings are so designed, proportioned and co-arranged with the area of the earthly world where he is destined to life that should they be changed, then the charm of all earthly would disappear for man, a harmonic proportion of impressions would be disturbed and the earth, now full of various play of life would appear to him either as a pale and lifeless ghost of the Earth or as the workshop of the earthly vitality inhibiting by a boundless glut of impressions and enormous activity everywhere. The same way man is endowed with the perfection of mental forces conformably with the destination of his life on the Earth: because if the eye of human comprehension could embrace by his mind all cognitive field; then for him, a ranger on the Earth, no mysteries would be left on the Earth, nothing for activity of his spirit... and he would not endure his material confinement — and he would unalterably aimed to the bosom of truth and elegance, to the bosom of unconditional being and endless all-round Perfection... It is occurred from the conditionality of spiritual perfection of man, that on the ruins of dead systems, religions and art, new flourished, like steps leading man to the temple of God, truth and elegance... but in the distance yet, in the distance a gleam of such mysterious temple is blinking and the soul is thrilling reverently!

Religion is a total of accepted notions about mutual relations of God, world and man and based on it external forms of theopathy; enlightenment is a total of notions formed by mentation about verities of physical and spiritual world; art is a sensual implementation of concepts by a sense of elegance generated in the soul of man.

All the opposites of the finite are settled in the field of unconditional verity and this field includes: Philosophy, religion and art<sup>50</sup>. Religion, philosophy and art, three kingdoms of spirit are on the same soil by the unity of contents and differ only by forms by which the subject registers with conscious: one of them is the form of sensual knowledge, sensual and objective knowledge where the Absolute appears to the eye and sense; the second form is an imaginative form; the third — free thinking of spirit<sup>51</sup>. Art brings the truth to consciousness through a sensual concept and this very concept includes the

highest and deepest sense therewith. The highest sphere of art is the sphere of religious service; thus in Greece it was the highest form of gaining insight the truth: the artist create gods, make perception of divine life and established the gist of religion. But the concept of abstract spirituality by exalting the subject of religion, may make it beyond the reach of art and art represent as if unworthy of the subject: such aspiration was traced in Mohammedanism and already ancient Plato armed himself against the gods of Homer and Hesiod. The kingdom of religion pedestaled over the kingdom of art: the Absolute in it by internal concept is carried from the figural in art to the interior of the subject so that veneration develops in the heart and soul. The third form of gaining insight into the Unconditional Spirit is Philosophy: there is a pure form of knowledge, free thinking, accepting the identical contents it tries to embrace and assume it by way of understanding by mind in it.

The dominating idea of religion is the idea of God, idea of endless, eternal and unchangeable Perfection: therefore its nature is depicted by fixity, inerrancy, invariability; therefore it, the leader loyal and unchangeable, not seduced in a transport of passions is given to man as the conductress in his morals. The dominating idea of science is the beginning of continuous mental development, the beginning of attaining the truth: therefore movement, changeability, falling and raising, struggle and perfection are in its character. The ideas of benefit and truth are clothed in the works of art, here is an expression both for contemplation of God and for researches by science, it as if reconciles the earthly with the heavenly.

### A. Religion

All religions come to three classes; since each of them represents either a merge of God with the world — pantheism, Sabaism and fetishism or an original individuality of many gods — pantheism or the unity and the generality of God, the cause of all being, the soul of the world — monotheism. If we take the philosophical concept of religions by Hegel<sup>52</sup> then it will be discovered that this division and Hegel's division are similar to a certain way to each other that is: primitive religion, animism — magic, fantasy, material, enigmatic — comes close to pantheism; the religion of the spiritual individualism — beauty, teleology — is included in the field of polytheism; the absolute religion — is a brilliant manifestation of monotheism.

Paying attention to the development of religions we'll trace that monotheism is alpha and omega of such development, that such development began by the unity, the thread of such unity impenetrated all

religion and such development is ended with the unity. Let's quote a thoughtful word of **Görres**<sup>53</sup>: «Having traced the root of time established in God, we'll find that one God acted in the universe, one religion dominated there, one service and one concept of the world, one law in all and one book of laws like generations — growing and like tribes — ever-young. All prophets as one prophet: they preached through one mouth and in one language, in various dialects and verbs. There are one and the same mythic elements everywhere like one and the same elements of nature are the same although subjected to the laws of locality. One force of life is given to the Earth: but it flourished numerously — by various kingdoms of plants, delivered diverse kinds of animals; while it limited itself to the trinity in man subjected yet to the unity... The diversity of the vegetable kingdom begins the service to the savagery; proceeded to the instinctuality of an animal and to sensuality; and finally rose to comprehensive generality of thought... Such wide comprehension and generality of the unity is the nature of the Contemporary Times; since the Divine light of Christianity shone upon the world, the gods of old times fell and the priests became silent». Religion originating from the unity is coming back to the unity, but through the world the development of which is its development, but through man the history of whom is its History. Man evading the true idea of God worshiped the heavenly bodies and fire of the Earth; tracing the opposite of life and death and their struggle worshiped the vital force and fertility (India); satiated with sensuality of struggle between life and death, illness and pleasure, excited by an outburst of activity, he traced the highest opposite — fight between good and evil and produced a heroic period of religion (Magism); the age of force is imputed to the age of wisdom and the highest opposite opened — vitality separated from substance, a contention occurred between a material element and spiritual element — the substance is acknowledged dead, one spirit is alive and the Soul of the world saw the light. Then the concept on the individuality of God originated from the concept on the separate nature of the spirit and the world of polytheism appeared with its utmost level of development is the Greek polytheism and the Roman polytheism, humanity of gods and morality of gods<sup>54</sup>. As the last thing the Creator was pleased to grant the Revelation to the world; the unity of God was finally manifested itself in the light of Christianity and development of religions was accomplished.

Let's consider the picture of contemporary religions<sup>55</sup>.

1. Fetishism and Sabaism. In the religions of fetishism the roughest and absurdist concepts about relations of God, world and man are

found; one can come across sacrifices of people and similar cruelties and absurdity; they attach a special force to magic and magic words. The worship to fetishes – in Australia, inland Africa, and in some countries of Asia and America. Sabaism that is more elevated in its concept as compared to fetishism, spread from Arabia to Peru and made a part of many religions.

2. Pantheism and polytheism. A) Religions of Lao-Tse, Confucius and Shinto fixed by the nature of pantheism and partially similar between each other. In the first religion is submitted to the supreme power, turns into civil institution and somewhat comes closer to atheism; the second partially recognizing an independent existence of good and evil spirits from the fields of nature trusted to it, is transformed into polytheism; in the third it is recognized being of the supreme creature and subordinated gods. The religion of Confucius is professed by scientists of China, Ana-Nama and Japan; religion of Lao-Tse, the most ancient in China, spread in Japan and Korea, with Tunguses and in Tonkin; Shinto is the most ancient religion in Japan. B) In Buddhism according to Klaproth, being of the Supreme Creature is denied and light space is offered instead (*l'espace lumineux*) where the germs of creatures are enclosed; but there is the third country, area of the prime cause (*la cause primitive*) of destruction of the destructible world however subordinated to the decrees of fate (*damata*) that is higher than such space etc. Buddhism originated from Hindustan survives in Nepal and Tibet; it has changed in Dekan; some of Hindus look at Buddha as the embodiment of Vishnu. Furthermore, Buddhism was embraced in Bukhara, the Ceylon Island, in such empires as Burma and An-Nama, in China, Korea and Japan. C) Brahmanism. The supreme god of Brahmanism is Para-Brahma: but it has not entered upon administration of the world by himself, it has delegated it to three gods such as: the god of the Earth – Brahma, the god of water – Vishnu, the god of fire – Shiva that make something a single whole (Trimurti). This religion spread in Hindustan and combined with Mohammedanism in Lahore it gave rise to Nanekism.

2. Monotheism. A) The Jewish religion not accepting revelations, except given to Moses, is of a conditional nature – locality, time and national character; the God of Hebraism is the God of the Old Testament, religion of the primitive unity established within people by a century-long life. The followers of such religion are scattered mostly in Europe and Asia. B) Mohammedanism is a banging manifestation of monotheism that recognizes Moses, Christ and Mohammed as prophets and messengers of God; it mixed the clear concepts of

Hebrew and Christian religions with materialism and sensuality, professed fatalism and enfeathered the development of some peoples. Separating into sects Islamism especially spread in Turkey, Persia, Berberia and penetrated into inland Africa. C) With the successes of the enlightenment Christianity becomes increasingly spread in all parts of the world. Not burden by conditionality it is embraced on each soil, strengthened in each tribe, adapt to each degree and each way of local, time and national development; thus, for instance the Greek and the Russ embraced Orthodox Eastern, Roman tribes were kept by Roman Catholicism, German tribes were formed by Protestantism.

The influence of religions extends to all manifestations of man's life, but mainly this influence is traced in the way of his morality.

The act of man is an expression of his internal predisposition. So, the moral statutes extend to: first, soul, thought and will of man where such act spawns; second, the acts themselves, in their manifestation in the outness; civil laws are guardians of morals of the latter; religion is a guardian of morals of the first.

A) Religions mixing the concepts of God and nature, obviously, can't clarify the relation of God to world and man in its rudeness and closeness to atheism and should the most unfavorable influence on the morals of the latter.

B) Only monotheism, providing more perfect concepts of God, may clarify the concepts of his attitude to the world and man and establish pure morals. **Montesquieu**<sup>56</sup> states that ceasing the hand of a criminal polytheism does not care about his heart while Christianity accepts all acts, all passions, all desires; but this is not quite correct: in the period of a certain development polytheism embraces the movements of the heart as well as external acts<sup>57</sup>. However, the moral of polytheism can't designate the plan of human life with such completeness and detail, determine his moral relations with such accuracy, watch over his heartfelt movements in all their shades with no omission as the moral of monotheism according to which every thought of man is his relation to God, while the Gods of Olympus concerned by their own fate, according to one of the writers, had always no time to deal with the affairs of the human race<sup>58</sup>.

C) While the influence of polytheistic religion depended only on their historical-fabulous element, nature of their gods, on their immediate instructions then under the sameness of predicted grounds, such influence would be the same both in the religions subordinated to the influence of the priesthood and religions nearly free of such influence. But the spirit and morals of religions are formed under the influence of

priests and hence the gods of the Greco-Roman polytheism often committed crimes inexcusable for mortals and Rome, from Mars and Vestal who reproduced her family tree, punished love of each vestal virgin<sup>59</sup>. A) The influence of polytheism not subordinated to the priests. Here religion is permeated with morality little by little with the successes of the enlightenment; the gods who are not the creators of morality remain its guardians. Complete dependence of morality on the gods would be possibly only under their unanimous will and omnipotence that polytheism lacks.

Religion directed people's activity to the creation of magnificent temples that are worth of the residence of the gods; religion also now spiriting the best pictures of **Raphael**, elevated poems of **Milton**, **Klopstock** and set its seal on the nature of Contemporary Christian art<sup>65</sup>. While Christian Europe flourished with science, the countries infected by Mohammedanism are plunged into illiterate. And in the ancient times religion connecting tribes led and protected the caravans of merchant-prayer; and now bringing closer the whole parts of the world religion partially leads to the spread of industry and general affluence.

One point left to observe that false religion becoming an exclusive actor of civilizations may set a seal of immobility on human development; such examples are in the Orient.

## B. Art

The elegant as a piece of art is the implemented idea of an artist<sup>66</sup>. Hence: A. it is deduced that the work of art (*Kunstwerk*) is a) a work of human activity, and not soulless nature; b) — a work for sensual viewing and from the field of sensual; c) it is the objective by itself; B. it is traced the duality of the elements of an artistic work (*Kunstwerk*). a) a spiritual element, idea; b) its manifestation in the external side of sensual<sup>67</sup>. Hence: art properly is one as one eternal idea, but manifesting itself in reality idea subordinates various way to the laws of conditional world, and therefore the art proper is divided and such division depends on two necessary conditions: a) on different proportion of idea and form; b) on various methods of its sensual representation. Division of art into its forms depends on the first condition (Hegel's *Kunstform*); into types, separate art — on the second.

Accepting such beginning of duality of art division let's observe that there are three forms of art: a) symbolic, b) classic, c) romantic; as an idea may be in three relations with its representation or formation (*Gestaltung*). 1. The first artistic form is a desire to transform into

a sensual image (*Suchen der Verbiendung*), the opportunity of representation; as the idea is most imperfect here, it has not found the image in itself and therefore only desire for it is traced in it here. Outside it, in the external side of sensual from which it should create an image for it, idea takes images: sensual subjects remain as they are; but the idea seeks to enter into them, read into its meaning and therefore they should express not what they are. In such artistic form, idea that has no other implementation, except images foreign to it, looks for itself in them and noticing their disproportion seeks to raise external images of reality to disproportional and boundless, produce unnatural, strengthen to elevate phenomena to an idea making them measureless and decorating them in abundance with a gloss of brilliance. As **Hegel** puts it, there is the nature of the Oriental art pantheism, which «on the one hand puts even in the worst objects the absolute meaning, on the other hand impels phenomena by force to express its worldview and therefore becomes bizarre, grotesque and vulgar. Sometimes the meaning and the expression are tied totally imaginative, and despite of all aspiration and attempts the disproportion of the idea and the form remains»<sup>68</sup>. 2. In the second artistic form idea and image are in full concord; therefore, in such form man, a combination of spiritual and sensual, is made the subject of art and hence idea may find a proportional representation in his image only. If such embodiment can't express fully the idea, then this is a drawback of art itself representing spiritual in sensual, and not the fault of classic art. 3. The third artistic form is a triumph of internal spirit over external sensuality: classic consent of idea and image are ruined again in it, but not because of uncertainty of idea as in the symbolic artistic form, but from its perfection higher than sensual. The difference is that let's quote Hegel's wording again: «In romantic worldview the idea, whose insufficiency shows symbolically the lack of the form, as the spirit and the soul must present itself perfectly in self, and on the base of this higher perfection it avoid the corresponding association with the external, for it can find and present its true reality and fact only in itself»<sup>69</sup>. Art came from the world, passed through man, proceed to spirituality; world, man, spirit – pantheism, anthropomorphism and theism!

The implementation of the idea in the external side of sensuality is the beginning of division of art into it types, called simply arts and depending on the property of sensual material. Such arts include: architecture, sculpture, painting, music and poetry. 1. In architecture the very substance balanced by the laws of gravity is a sensual material of elegance; such substance not completely expressing

ideas is its symbol and therefore architecture is a major type of symbolic art. 2. In sculpture there is not already a rough substance, but the form of substance: spirit is embodied in matter, idea and image appear in full harmony and therefore sculpture is a major type of classic art. 3. painting, music and poetry are more able to express romantic art allowing less corporeity; since the material of the first is the appearance of colors, the second — sound, the third — human word. The elegance of three arts — architecture, sculpture and painting — is perceived by a sense of sight; the elegance of music — by a sense of hearing; in poetry it appears a combination of sound and image. Poetry is the most complete art: its thread develops in all artistic forms, and forming its separate world it falls into epic, lyric and dramatic: in the first a preponderance of objective is traced, in the second — subjective, in the third, this crown of all arts, it appears a combination of the first and the second. From the art of word development comes to the word of science.

The influence of art is extensive<sup>70</sup>: it extends to a) character and morals; b) languages; c) human tribes; it is discovered in d) organization of society; e) in industry; f) in science; g) in religion. A) Mortal life of man is a hesitation between good and evil, earthly and heavenly, it is a struggle of spirit and flesh, worry between sadness and joy, false and truth; when man tied with contention of temporary being, is seeking for salvation and peace in the world, is looking for and fails to find and is looking for again... the angel-propitiator, art appears... Uniting spirit and substance, earthly and heavenly, idea and image it brings together in it, harmonizes and this harmony brings to the character and life of man. B) Language is a material of the noblest of arts; how wouldn't the language feel its influence? Originally not grammar, but poetry, in folk songs and religious anthems forms force and flexibility, riches, sonance and conciseness of language; it creates multivocal words and their beautiful combinations — and the language of poetical people is always beautiful... C) Elevated works of art is a noble pride of tribes and peoples, in its essence it is the property of each of members of such tribes and peoples: they are connected them by the nexus of general veneration to a single sanctity. D) In the organization of society, art should excite the notion of gracefulness, reward its members for certain inconveniences and nourish the spirit of sociality between all classes and persons. E) In the industrial class, elegant may, at least for a while, release the heart from the bark of materialism, torment and excite by a holy appeal to the field of heavenly. F) Science, in its pure abstractedness apprehended by a few number of the select, may rele-

gate sacred and elevated verities by art to the lower grade of society and saturate the hearts of its junior sons with it. G) From time immemorial religion takes art as an interpreter of its mysteries and now it speaks to the heart and mind of the loyal beautifully and clearly in psalms and pipe organ, in the representation of mortal life of Christ and His Sainthood.

### **C. Science**

Science is the utmost moment of development of human spirit: the ancient world did with religion, the Greco-Roman world formed and joint art, the modern time developed science. The germ of all his development lies within man's spirit, and hence: during the first times science already existed — man cognized certain truths; then these special truths in terms of proximity to the subject and view on the subject, joint in separate systems of truths, separate sciences, and separate organic bodies; finally, philosophy, science of the truth, prevailed over the world of sciences, penetrated into its compositions, infused its life-giving spirit. A non-organic bulk of information, the remains of the primitive chaos of knowledge, still remains scattered at all our steps; the step of organic knowledge — science; the highest step of knowledge overlooking all spheres of truths, science of truth and science of sciences is philosophy, so called properly, and philosophy of science<sup>71</sup>.

Accepting the division of **Alliot**<sup>72</sup>, let's consider multivarious fields of science. All subjects of sciences are divided into two extensive sections: the subjects of physical world and the subjects of moral world; therefore two divisions of science: physical sciences and moral sciences. A) Physical sciences. Three sciences comprising it are based on three orders of visible world: mineralogy — about non-organic beings or minerals, botanic — about organic beings not endowed with senses, zoology — on organic beings endowed only with sense or endowed with sense and feeling. Knowledge of man as a physical being and knowledge of plants ramify and develop in special sciences as natural history of man, animals and plants, anatomy, physiology, hygiene, pathology, therapeutics, Pharmacology of man, animals and plants. Sciences of Geology and Geodesy are formed from considering masses of non-organic beings to the structure of all the globe; astronomy is formed from considering non-organic beings as bodies making the universe; physics is formed from considering laws and general properties of nature in its various states and forms. Chemistry attempts to enter to the intimate laboratory of nature inquiring into the laws of composition and decomposition of bodies in all its kingdoms. Mathematical

sciences raise value and space to the original subject of research. B) Moral sciences. These sciences comprise cognition of beings endowed with mind and free will, cognition of properties of such beings, relations and laws. Such beings are intelligent soul of man, spirits and God; therefore the following sciences form: psychology, pneumatology and theodicy. The properties of beings condition their mutual relations, determining the laws of beings that are moral in their essence, if they relate to will, mental, if they relate to mind. Moral laws that determine the relation of inseparable to itself – particular morality; civil morality that that determines mutual relations of citizens; political morality that determines mutual relations of the government and citizens; public right that determines mutual relations of peoples; general morality that determines relation of man to man; science of religion that determines relation of man to God. But man does not always take the path outlined by mind and his activity is not always an expression of his relations: cognition of laws governing human activity is the subject of empirical morality science; cognition of facts revealing a free human will sometimes performing, sometimes violating his present relations is the subject of historical sciences. Mental laws relate to mind of man, and their subject is the attainment of the truth and elegance in the works of human spirit: here the following sciences form, first, aesthetics, rhetoric, pieties and grammar; second, science about mental abilities of man, and science about means to attain the truth.

Not to mention that science is the purest form of cognizing the truth and knowledge, speaking literally, is required at each step of life; let's consider the activity of science in its influence on other elements of civilization that is a) language; b) character, morals and customs; c) generations and d) organization of society, industry; f) art; g) religious beliefs. A) That what does not exist in concept then it does not exist in word: therefore the richness of language is determined by the richness of concepts; the definitive capacity and accuracy of languages determine the accuracy and definitive capacity of language. The introduction of writing and its appearance render significant influence on the development of language therewith. B) The morals of man is an active expression of relations understood by him and like legal provisions determining such relations can't penetrate into all movements of life then science clarifying such relations renders strong and significant influence on morals and life of man thereby. C) Science opening the unity of human spirit and laws of mentation pointing out the Providence wakeful over man, has clarified the unity of mankind to man and enter all human generations into one brotherly family.

D) Isn't it science that preserves and presents the models of social organizations and legislation approved by experience of century-old historical life of peoples, changes of these organizations and legislations with locality and time, circumstances and education? Discovering psychological secrets of man, it pointed out correct ways and means to prevent it from crime to its appointed leaders. E) Inquiring into nature, properties and laws and thus making man the lord over soulless forces of nature, it handed over to man a divining-rod with a wave of which the mysteries of industry emerged. F) The area of land and the bosom of sky are accessible to science and the more it introduces an artist to the secrets of truth, the brighter its front is mirrored in its work, the stronger is the idea expressed by it. G) Illiterate man does not seek to cognize a divine spirit and to implement elevated morality of religion: one divine letter is enough for him and therefore he looks like a ringing cymbal and sounding brass... When religions is limited to sensuality of rites and thus its spirit is darkling dimming... science, spreading light of truth, may still ignite sometimes the flame of religion awakening its spirit, vivifying substance... However, there maybe such times when science, dreaming of replacing sciences, strives to fix its changeable torch on the altar of not vesper light of religion and society which religious basis established on the anchor of eternity is undermined and ruled by changeability of purely human mentation, runs by the steps of suddenly fast and radical changes, circling and destroying in the vortex of overturns...

### **3. Industry**

It is long<sup>73</sup> since thorough concepts of political-economic writers established and proved the efficiency of all three industries. A farmer extracted material from land, manufacturer, forming material for satisfaction of needs and a merchant giving work into hands of a consumer, creating from nothing, give themselves everything, however the ability to satisfy our needs for everything that their activity deal with and hence they are productive in any case. As in each industry there are many industries and modifications then equally sometimes all three kinds of industries combine all in one; thus, for instance, a farmer – miller is already a manufacturer, and a farmer-seller of his produce is already a merchant. In each industry it is traced own specifics: thus, for instance, for farming, more land is required, for manufactory industry – more labor; for trade – capital. In each industry certain information is required; but under equal opportunities trade industry concentrating the activity of other industries requires the most information.

Taking into consideration the comments made by **Storch** and other political economists in their highbrow works, let's view the influence of industry on a) the physical state of man; b) language; c) morals; d) organization of society; e) art; f) religion and g) science. A) A growth of population numbers nearly exclusively depends on the extent of abundance of works required for satisfaction of necessary needs of residents. But as a savage man finds works on one and the same space to maintain life of less numbers of people than a shepherd, and a shepherd — for less numbers than a farmer and as the manufactory industry is situated on even lesser space than agricultural and trade requires even lesser space, hence the finding that in one and the same country and on one and the same space much more residents of trade, manufactory and agricultural craft may be located than only shepherds and only savage men may be located. Life of a savage man may intensify certain senses of man and fortify his physical organism so that it will less exposed to illnesses; but in such way of life man is exposed to endless hazards and unable to prevent illnesses, not curing them becomes their inevitable victim; to the old age, instead of usual propitiation, a savage man can't render another service, except a sad service of release from useless life. The shepherd way of life is more favorable for health of man: the subsistence of a shepherd is more ensured; his occupation is not that hazardous; attentive to plants, he learns to consume them to alleviate illnesses. In the state of husbandry the very property of works always exercising in a moderate way the forces of a farmer and air of fields should conduce to the development of his forces and strengthening of his health. In other industries and especially manufactory the monotony of occupations, inconvenience of position fuggy air infected by dirt of evaporation are adverse to man's health; but as the development of manufactory and trade industries is accompanied by the highest degree of education, then the means are found to maintain health and a certain degree of content spreads everywhere, thus facilitating and ensuring the existence and the destiny of the lower classes of people. B) Acquainting man with new items industry coins new words; with the products of its activity it carries over concepts and language from country to country and from people to people; people that has anticipated other peoples in the development of any industry, introduces the terms themselves together with it in the languages of other people; thus in Russia: the navigation terms are Dutch and English etc. C) In life of a savage man entrapped the uncertainty of existence and a lack of security, difficulty in getting the means of subsistence, occupation with hostile and hazardous, all this leads to distrust, cruel-

ty, disrespect to the ownership rights and therefore we meet here and there disrespect to the old people, contempt and slavery of the softer sex, enjoyment of sufferings of an adversary, we meet inhuman anthropophagi. In shepherd's life occupation is not that difficult, existence is more provided, relations are more peaceful and a certain abundance of works, all this lays the foundation of easing the morals — facilitating the state of a woman, hospitality etc. In farming, intimacy with nature can't but tell on the morals of a farmer and therefore we find simple, strong, noble morals here; here the community of people is not that scarce so that to weaken a sense of sociality and settle savagery and not that narrow and multivarious so that to give birth to the seed of poisoning. It seemed to some people that development of industries — manufactory and trade — entails wealth therewith, and wealth produces luxury and depravation; but as there are good morals with wealth, there are also vicious morals, one should agree that the influence of wealth depends on its just or lawless acquisition and conditioned by its use. D) The peoples-entrappers do not nearly have property, peoples-shepherds already have it, people-farmers is a land property: under the development of industry it occurs a disproportion in fortunes, wealth is always surrounded by hostile and dangerous watch of poverty, and the law only may secure it. In the first age of society a bodily force leads to respect; in farming and shepherd societies a birth and wealth are closely connected with each other at such time; only in manufactory and trade societies causing mental development of man this development entitles to respect and social influence. In farming societies a surplus in produce of land and a lack of opportunity and ability of the owner to consume them for his personal needs introduces a custom to keep and feed the whole army of clients, vassals and the menials, the custom strengthening the aristocracy; in the manufactory and trade states the opportunity of the owner to turn produce for its own enjoyment leads noble families to the downfall and a loss of respect and serves as a pretext for eradication of aristocratism. E) Art develops not earlier than the existence of some society members has been ensured, when a certain surplus of produce occurs; since for flourishing sciences and art it is necessary that some society members can leave a straitened situation of a day laborer whose all activity is swallowed up by making a daily bread and therefore his spirit is not free. F) A person who can't understand the real reasons of natural phenomena, has God everywhere, except the real God; but industry enabling some society members to observe the nexus and causes of the phenomena of nature, makes rude religious concepts inappropriate. H) In the sphere of entrapper,

shepherd, farming every day life there are many various occupations and therefore thinking and thought awaken here; but as there is a shortage of free time, no high mental development may occur. On the contrary, in societies where not only farming, but manufactory and trade industry have reached a certain level of development, though there are people whose scope of occupation is too uniform and mechanical may kill any thinking; but then there are others who taking the position convenient for watching over the course and causation of all other occupations and phenomena and thus attaining the highest mental development willing societies an imperishable capital of such development.

The best step of society on the path of development is its entering upon the state under which each is rewarded by his activity, lives on it and enjoys it — and all social physical activity, instead of wars and robbery of foreign countries and peoples turns turn to production of generally beneficial items.

### **III. DEVELOPMENT OF MAN AND LINE OF HIS ACTIVITY**

From a special extension of influence of one of figures of social life, often civilization itself receives a stamp of a special nature. In one states, the eyes of all citizens are engaged at the course of political affairs with diligence and attention as well as on the solidity of a social union, the state of rights of everybody so that a violation of any minor right of even of the most minor citizen might affect all masses; in others, citizens becalmed of prompt for good and good-minded guardianship of the government, and absorbed in their private affairs, awake and watch over attentively the state of their political relations only under an appeal of the governmental authority in the event of significant and obvious danger to a social union. Where a religious spirit manifests itself in all popular movements and told vividly on all its activity; where industry is a dominating figure of a popular civilization; scientific education has got the upper hand in other countries, aesthetic education — in others. Nearly exclusive attention is paid to the development of man physically with some peoples; the others try to develop nearly exclusively mental abilities; there are tribes being in the circle of hostile neighborhood of other tribes try to develop most of all, in terms of the instinct of self-preservation, and maintain in their posterity stability, force, invincibility of revenge and hatred to the adversary<sup>74</sup>.

However, all figures of a multiplicate process of civilization are mutually linked, penetrate into each other, revitalized and maintained: therefore such phenomenon of a popular life is often attributed to some of them that is a product of the influence of other figures<sup>75</sup>. But that society is happy where the action of all its elements, organization and industry, arts, science and religion, develop in concert, driving man concertedly to the activity, development and perfection of his forces: a) *physical*, b) *mental* and c) *moral*, and d) *leads to the direction of a physical-moral activity of man* — for his personal benefit, for the benefit of society and for the benefit of all humanity: since this is the objective and destination of civilization, the criterion of civilization, the flower and the crown of civilization; this is the fact that assesses everything, where everything runs into, that pays off everything. Thus, the devastation of destructive conquests if they promoted a physical-moral development of man and improved the line of his activity, are excused by the posterity; thus a gloomy shade of villainy lying under on the times of overturns is dispersed like a fog by wind of times and like a spot it is washed by a wave of centuries, but the giant of human development risen under the appeal of such times is pure from decaying and the voice of a genius sounded during the storm of such times is humming from century to century; thus religion, art and science that are elevated things by themselves, elevate in the concepts of man even more as the engines of his development and the guides in his moral development.

## **1. Development of Man**

### **A. Physical Development of Man**

A physical development of man is both in the perfection of his organism, his bodily constitution and education and in abilities acquiring by bodily organs to make various actions: the first may be partially called the perfection of natural, and the second — acquiring, although the very organism of man however is subject to improvement to a certain degree. A total of physical ways collected by man to strengthen his physical activity may be attributed to the perfection of such development as auxiliary means.

The perfection of a human organism includes: in the force of bodily organs, their correctness and proportion, in their ability to function as they are intended for by nature or to exercise functions man's diligence might make them to perform. Such perfection may be either evenly spread to all bodily organization of man or concentrated in his certain organs; thus, for instance, one can have an excellent ear and

poor eyesight etc. Physical organs of man may be brought to the ability of making various actions; thus, for instance, one may acquire the art of working one items, another — other items. These two kinds of physical perfection of man are subject to mutual influence on each other: who is endowed with a good bodily organization is able to acquire perfection in various exercises; a frequent exercise of organs may bring them to the highest perfection. However, one can have an excellent bodily organization and do not acquire any abilities; on the contrary, it may be so that under a physical defect of organization to acquire many physical abilities by way of a diligent exercise.

### **B. Mental Development of Man**

A mental perfection of man is both in perfection of his mental organization under which his mental forces are able to function as they are intended for and embrace the development man may bring them to, and in the very development of mental abilities to which man brings them inuring through training and exercise to the performance of various actions. In addition, a total of mental ways devised and collected by man to strengthen his mental activity may be attributed to the perfection of such development as auxiliary means.

The perfection of a mental organization may be either evenly spread in the field of human comprehension or concentrated in the specifics of his certain abilities; thus, for instance, one can have an excellent intellect and bad memory, and vice versa. Man, through training, may tune his abilities to a certain kind of mental occupation; thus, for instance, the abilities of one can be strong in mathematical sciences, others — in researches into life of humanity, the third — in researches into the properties of nature, etc. As various degrees of perfection of mental organizations may be the cause of various successes in mental occupation then on the other hand, exercises develop the abilities themselves. However, the luckiest mental gifts may be left without any development and employment to any kind of occupation; and a certain degree of perfection may be attained in certain mental occupations under poor mental abilities.

### **C. Moral Development of Man**

The development of moral forces of man is in force, completeness and space of his will, affections and desires under which man could be able swim across the sea of life as a boat with a complete set of sails and under which he could masterfully elect, direct and make his way, thus attaining the objective envisaged by him.

If it is just that people endowed with an exceptional strength of will, affections and desires, then one can't but mention that in this field of man's nature he can produce, change, elevate a lot of things that he can elevate the strength of his will, inflame and blow out the flame of affections, strengthen and mortify a gust of desires and so to say tune the chords of own heart. The strength of moral motives may be elevated at one point and in the other point it may be weak; thus, for instance, one can have patience and have no bravery, one may have bravery and have no courage, one can have a strong hatred for vice and does not have the same love for virtue etc. The rules and opinions strengthening moral strength can be attributed to the moral development of man as auxiliary means.

All three developments such as physical, mental and moral are mutually connected and as a product of multivarious influences are in connection with all elements of civilization.

## **2. Line of Human Activity**

The triadic development of man, physical strength, mental strength and moral strength failing its moral nature, failing its proper direction, failing its aspiration for his activity towards perfection of man, personal, for the benefit of society, for the benefit of all humanity, what is such development as not a sword in the hands of a criminal? However: a) man can base the benefit of his personality on the acts detrimental to society; b) man acting for own individual benefit and for the social benefit, may harm the development of other members of general human society; c) finally, man may combine the benefit of all humanity with the benefit of his personality and benefit of all society, and this latter course of action is the summit of moral perfection of nature of human deeds.

Honesty and virtue, negative and positive, right and good are two various degrees of morality of human activity. Man may direct his personal activity to the aim of personal development until it precludes the same aspiration of beings his like, until their rights are violated: this is our duty, it may be requested from us; furthermore, man may extend the good, may further the perfection of all that surrounds him and development all his fellowmen: the virtue calls us for that. But as in economy of the world activity the development of all organism should be preferred to the development of one particular organism then man should direct his efforts to the development of all society and subject to call of need sacrifice himself for the latter. What man is for society then society is for man is one of complex members of that great multi-

plicate organism: activity, development and perfection of all citizens should run into one social development and activity, development and perfection of each of societies should run into the cup of general development of humanity until it reaches the edge indicated by the agency of Providence... and life of humanity will accomplish!

In societies of the Greco-Roman world it is traced the aspiration to build a temple of sociality exclusively because society so to say absorbs personality and humanity; religions and enlightenment of the ancient world, being national, did not only ease the severity of despotism of society, but established it even more. In societies of the new world with all strength of public organization personal development is not excluded and the idea of universal human development manifests itself. Feudalism and enlightenment even more awoke and strengthened the development of personality in man<sup>76</sup>; and Christianity and then the enlightenment in its wake disseminated the idea of brotherhood, clarified the concept of unity of the members of the great general human family, and disclosed the idea of humanity.

All human development seeks to endue man with force, wisdom and goodness, qualities so closely connected with each other that one failing other is contemptible: force failing wisdom and virtue is criminal; wisdom failing force and goodness is fruitful, goodness failing force and wisdom is useless. The aspiration to develop his force awoke in man already in the ancient times; nowadays he got to like knowledge, developed science, knew the necessity of wisdom, but he still has to fill his deeds, to infuse his activity with goodness<sup>77</sup>... The aim is seen, but the path is still long... However, a step has already been made, the theory is not barren: «We shouldn't care if some brilliant theory remains just theory for so long... for the child learns things which it could apply only becoming a man; and exactly because of it the child learns these not in vain»<sup>78</sup>. Comparing the period of our civilization with the periods already passed we may hope for a blessed future and praise Providence.

## FOOTNOTES

<sup>1</sup> A brief overview of opinions of many outstanding writers (Ocellus Lucanus, Machiavelli, Bacon, Leclerc, Vico'Ballanche, Boullanger, Turgot, Condorcet, A. Comte, Kant) may be found in the work of Buchez. Buchez: *Introduction à la science de l'histoire*. Bruxelles, tom. 1, p. 51–163. Compare: Baco: *De augmenis Scientiarum*, Vico: *Scienza nuova*, Boullanger: *Antiquité dévoilé*, Turgot: *Ouevres*, his two speeches are especially remarkable found with Lerminier (*De l'influence de la philosophie de XVIII siècle sur la legislation de XIX, Pièces justificatives*), Condorcet: *Esquisse d'un tableau historique des progrès de l'esprit humain*; I. Kant: *Idee zu einer Weltgeschihite* (*Kleine Schriften von Immanuel Kant*. Neuwied, 1793, S. 1–43).

<sup>2</sup> Herder: *Ideen zur Philosophie der Geschichte der Menschheit*. Leipzig, 1828, B. I, S. 344.

<sup>3</sup> Herder, *ibid*, B. I, S. 345.

<sup>4</sup> Guizot: *Cours d'histoire moderne*. Bruxelles, 1835, p. 25.

<sup>5</sup> A wild human caught in the woods where he lived distantly from his like is an exceptional case (Ferguson: *Experience of the History of Civil Society*, part I, p. 1).

<sup>6</sup> The very civil society could hardly find the subject and get education without competition in peoples and exercises in war (Ferguson, *ibid*, part I, p. 54). This idea has been partially developed by Shulgin in his work: *A Description of Character and Contents of Three Recent Centuries*.

<sup>7</sup> Nearly all political economists before Smith and his followers inclusively.

<sup>8</sup> Storch: *Cours d'Economie politique*. St. Peterburg, 1815, t. V, p. II.

<sup>9</sup> Balbi: *Abrégée de Géographie*. Paris, 1834, p. 53.

<sup>10</sup> Guizot: *Cours d'hist. moderne*. Bruxelles, 1835, p. 6–19.

<sup>11</sup> Dupont: *About Productive and Trade Forces of France*. Moscow, 1831, p. XX–XXII.

<sup>12</sup> *The Journal of the Ministry of Education*. 1834, p. 431–433. The abstract from Guizot made by M. Pogodin.

<sup>13</sup> Dugald – Stewart (*Esquisses de philosophie morale*, trad. par Jouffroy. Paris, 1833). He made a clear distinction between moral development of man and the direction of his morals. Tom. I, seconde partie, p. 57–228.

<sup>14</sup> «Humanity is the sense of the man's nature and the Lord gave the destiny of the mankind in the hands of mankind itself with this sense» – Herder: *Ideen zur Philisophie der Gesch. der Mensch*. B. II, S. 220.

<sup>15</sup> I believe it is not redundant to quote an attempt of Cousin to deduce the major elements of human development from basic needs of human spirit: «List of the fundamental needs of the human spirit: 1. the idea of utility – mathematics and physics, industry and politic economy; 2. the idea of justice – civil society, state, law; 3. the idea of beauty – art; 4. the idea of God – religion, cult; 5. the idea of reflection, of the reality and necessity of the needs and the acts, which became the basis to the philosophy». Cousin: *Cours de philosophie. Introduction à l'hist. de la philosophie.* Bruxelles, 1836.

<sup>16</sup> The development of such thought could be found in the work of Ferguson: *Experience of History of Civil Society* and in the works of Shulgin: *A Description of Character and Contents of Three Last Centuries.*

<sup>17</sup> Virey: *About Man.* Moscow, 1828. – Virey: *Hist. naturelle du henre humain.* Bruxelles, 1834. – Lacépède: *Alter der Natur und Geschichte des Menschengeschlechts.* Frankfurt am Main, 1830.

<sup>18</sup> Hermann von Meyer: *Paläologica zur Geschichte der Erde und ihrer Geschöpfe.* Frankfurt am Main, 1832. Cuvier: *Recherches sur les ossemens fossils.* Paris, 1825. Tom. I. *Discours sur les revolutions de la surface du globe.*

<sup>19</sup> Cuvier. *Régne animal.* Tom. I, p. 80.

<sup>20</sup> Lesson: *Hist. naturelle des mammifères.* P. 24.

<sup>21</sup> Link: *Die Uhrwelt.* Th. I, S. 134.

<sup>22</sup> Lacépède: *Alter der Natur etc.* S. 129–139.

<sup>23</sup> The groundlessness of such names was proved by Klaproth, but he has not given better. Klaproth: *Memoires relatifs à l'Asie.* Tom. 2, h. 4. Virey distinguished two main human generations, Blumenbach and many others – five, Bory-de-Saint-Vincent – eleven.

<sup>24</sup> According to Lesson: *Hist. naturelle des mammifères.*

<sup>25</sup> Schlosser. *Histoire universelle de l'Antiquité.* Trad. de l'all par Golberg. Paris, 1828, tom. I, p. 85–90.

<sup>26</sup> The facial angle of Kampffer and notes of Herder. Herder: *Ideen zur Philisophie der Gesch. der Mensch.* B. II, S. 217–226.

<sup>27</sup> Lacépède: *Alter der Natur etc.* S. 133 und 135.

<sup>28</sup> Städler: *Wissenschaft der Grammatik.* Berlin, 1833.

<sup>29</sup> In his «Philosophy of the History». See abstract in the «Telescope» (1831, № 15). The comparative view of the whole pyramid of languages.

<sup>30</sup> Städler: *Wissenschaft der Grammatik.*

<sup>31</sup> Städler, Schlegel, Ampère (several thoughts of the latter for comparative history of languages see in the «Telescope», part XVIII. p. 403).

<sup>32</sup> Ampère — Virey (Hist. naturelle du genre humain. Tom. III, p. 74 et 75), — My «Comments in the Thoughts of A. Mogyla».

<sup>33</sup> Lacépède: Alter der Natur etc. and Dictionnaire des sciences naturelles. L'homme.

<sup>34</sup> Virey: Hist. naturelle du genre humain. Tom. I, p. 63

<sup>35</sup> Matter: De l'influence des mœurs sur les lois et de lois sur les mœurs.

<sup>36</sup> Matter: Ibid, nearly everywhere in the work.

<sup>37</sup> Heeren: De la politique et du commerce des peuples de l'antiquité. Paris, 1830; and Ritter: Die Erdkunde, passim.

<sup>38</sup> «The Pantophagy of Man». Buffon, Haller, Blumenbach, Virey etc.

<sup>39</sup> Broussonnet: Memoirs sur les dents. Virey: Hist. nat. de genre humain. Tom. II, p. 201.

<sup>40</sup> Virey, ibid. Tom. I, p. 196—235.

<sup>41</sup> In addition to observations of travelers let's recall the Cossack's proverb (approximate translation): «Cossacks have feast today and fast tomorrow».

<sup>42</sup> Heeren: De la politique et du commerce des peuples de l'antiquité. Tom. I, p. 76—80.

<sup>43</sup> Creuzer: Religions de l'antiquité; refondu, complété et développé par Guignaut. Paris, 1825. Tom. I, Introduction, p. 45—50.

<sup>44</sup> Montesquieu: De l'esprit des lois. Paris, 1803. Tom. I, p. 84.

<sup>45</sup> Krug: Dikäopolitik. Leipzig, 1824. S. 220.

<sup>46</sup> Montesquieu: De l'esprit des lois. Tom. I, p. 76.

<sup>47</sup> By the way: Schlözer: Staatsrecht und Politik.

<sup>48</sup> Krug: Dikäopolitik. S. 261—265.

<sup>49</sup> The very inconvenience of space in their dwellings may partially serve as evidence to it. Matter: De l'influence des mœurs sur les lois etc., p. 434 and his quotations.

<sup>50</sup> Hegel. Werke. Berlin, 1885. B. X. Vorlesungen über die Aesthetik. B. I, S. 130.

<sup>51</sup> Hegel. Vorlesungen über die Aesthetik. B. I, S. 132.

<sup>52</sup> Hegel. Werke. Berlin, 1885. B. XI—XII. Philosophie der Religion. B. I—II.

<sup>53</sup> Görres: Mythengeschichte der asiatischen Welt. Heidelberg, 1810. B. II, S. 649.

<sup>54</sup> Benjamin Constant: Du polythéisme romain. Paris, 1833. Tom. I, p. 11—20.

<sup>55</sup> According to Balbi: Abrégée de Géographie. Paris, 1837. Classification des habitans de la terre d'après les religions qu'ils professent. P. 63—77.

- <sup>56</sup> Montesquieu: *De l'esprit des lois*. Tom. IV, p. 56.
- <sup>57</sup> Benjamin Constant: *Du polythéisme romain*. Tom. I, p. 55.
- <sup>58</sup> Benjamin Constant, *ibidem*. Tom. 1, p. 56.
- <sup>59</sup> Many examples of the said are adduced by Benjamin Constant in the referred work.
- <sup>60</sup> *Ibidem*. *Vendidad — Persians, Havamaal — Scandinavians, Samavedam — Hindus etc.*
- <sup>61</sup> Examples of this are collected by Benjamin Constant in: *Du polythéisme romain*.
- <sup>62</sup> Montesquieu speaks: «The laws which make one consider something valueless as something necessary soon will make one consider something necessary as something valueless». *De l'esprit des lois*. Tom. IV, p. 21.
- <sup>63</sup> The followers of Zoroaster, the Parsee still use the language of Pelvi in acts of worship, the Indian Brahmins — Sanskrit, the Siamese — Bali, the Jews — Hebrew, the Roman-Catholic Christians — Latin, the Greco-Russian Christians — ancient Greek and Old Church Slavonic etc.
- <sup>64</sup> Heeren: *De la politique et du commerce des peuples de l'antiquité*. Tom. I, p. 18.
- <sup>65</sup> Hegel: *Vorlesungen über die Aesthetik*; Bakhman: *General Outline of a Theory of Arts*. Moscow, 1732, part I, p. 31–42.
- <sup>66</sup> Hegel, Bakhman and many others.
- <sup>67</sup> Hegel, Bakhman and many others.
- <sup>68</sup> Hegel: *Vorlesungen über die Aesthetik*. B. I, S. 100.
- <sup>69</sup> Hegel: *Ibidem*. B. I, S. 106.
- <sup>70</sup> See Schiller on the influence of art: Schiller: *Die ästhetische Erziehung des Menschen, über den moralischen Nutzen ästhetischer Sitten etc.* *Sämtliche Werke*. Stuttgart, 1838, B. XII. See Schlegel on the influence of dramatic art: Schlegel: *Ueber dramatische Kunst und Literatur*. Heidelberg, 1817. B. I, S. 3–76. See also: Schiller: *Die Schaubühne als eine moralische Anstalt betrachtet*. *Sämtliche Werke*, B. X.
- <sup>71</sup> Philosophy is the supreme development and the supreme form of the thought» — Cousin: *Intr. à l'hist. de la philosophie*, p. 1–25; «Philosophy is present in each epoch of the human history, and its role increases from period to period; it tends unceasingly to become the more considerable part of the history» — *idem*, *ibid*, p. 26; «The history of the philosophy always goes as a last part in the historical works as well as philosophy itself is a last, supreme grade of the internal development of the spirit and of the development of the epoch» — *idem*, *ibid*, p. 59.

<sup>72</sup> Alliot: *La philosophie des sciences*. Tom. II, p. 362–364. Generally, all systems of distribution of human knowledge beginning from Baconian (*De augmentis scientiarum*) to Amperian (*Essai sur la philosophie des sciences*. Paris, 1834), including the systems of bibliographers here (see in brief Peignot thereabout: *Dictionnaire raisonné de Bibliologie*. Paris, 1802. Tom II. *Système*, p. 200–281) are quite unsatisfactory and Gottlob Ernst Schulze tried to clarify the reason for that in his *Encyclopädie der philosophischen Wissenschaften*. Göttingen, 1824, p. 3 and 4.

<sup>73</sup> From the time of publication of a famous work by Adam Smith refuted the one-sided political-economic systems of mercantilists and followers of Kenne, physiocrats.

<sup>74</sup> Such examples, in addition to other writers, may be found with Charles Comte: *Traité de la législation*. Tom. I–IV.

<sup>75</sup> Thus, for instance, the cause of depravation of the Romans under the emperors occurred according to Chateaubriand, from paganism, according to Benjamin Constant, from despotism.

<sup>76</sup> Guizot: *Cours d'hist. moderne*, p. 104–112.

<sup>77</sup> How far is still this perfection from our century is partially indicated in the work of Matter: *Histoire des doctrines morales et politiques des trois derniers siècles*. Paris, 1837. Tom III. See in the end.

<sup>78</sup> Herder: *Ideen zur Philosophie der Geschichte der Menschheit*. B. II, S. 256.

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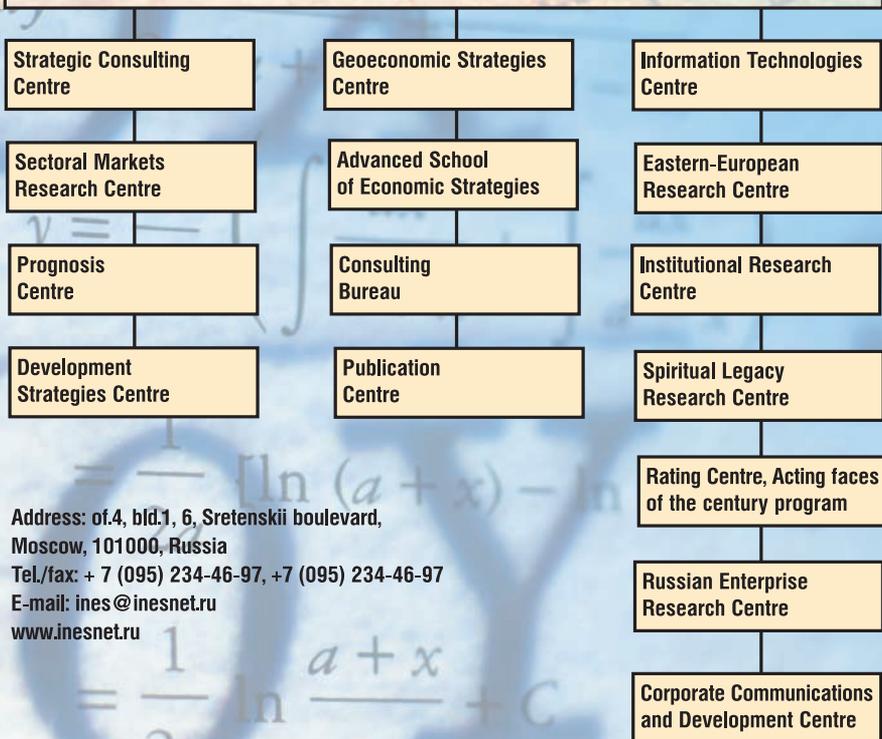
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The issue of civilizations — their past and future, dynamics and interaction — are among the overriding problems of social sciences and socio-political life of the 21<sup>st</sup> century. The book of known Russian scientists B. N. Kuzyk, Corresponding Member of Russian Academy of Sciences, and Yu.V. Yakovets, Academician of Russian Academy of Natural Sciences, is devoted to these matters.

The reader will find an original treatment of the theory of civilizations, cyclical-genetic regularities of their dynamics, dialogue and interaction, substantiation of historic time compression law. In a civilizational aspect the demographic, natural-ecological, technological, economic, socio-political, spiritual factors of society's development are investigated. The history and the future of civilizations are expounded along three historical super cycles. For the first time the cliometric measurements of the global, world and local civilizational dynamics have been made using a geocivilizational matrix and supplemented by a situation analysis, including a forecast of the place of Russia in a geocivilizational space of the 21<sup>st</sup> century.

This treatise appeals not only to scientists, post-graduates, students, but also to statesmen, politicians and public figures, to everybody who feels concern for the foredoom of the country and humankind.

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