

ever, is purely superficial. The profound causes of the difference have another genesis. The pretensions on the part of traditional economics, to be able to establish economic laws that are effective for purposes of prediction, proceeding only from the conditions of existence, turned out to be illusory. In that sense, traditional economics failed to justify being called “the law of the house.” . . .

No fundamental achievements

Despite the dispensing of Nobel prizes for economics, this discipline has yielded virtually no fundamental achievements, which have predictive validity.

In the mid-20th century, a new tendency arose—mathematical economics, which is linked with the names of J. von Neumann, O. Morgenstern, L.V. Kantorovich, H. Nikaïdo, V.V. Leontyev [W. Leontieff], D. Meadows, M. Mesarovich, et al. The research and prognoses of the Club of Rome became particularly well known, but were not borne out. A powerful and highly ramified mathematical apparatus was developed, but due to the absence of promising economic ideas, the pragmatic validity of this tendency proved inadequate. The world developed so rapidly, that economics was unable not only to forecast coming changes, but even to explain those that had already taken place. In this phase, too, economics failed to justify its name, and, despite the prestige of the profession of economist and the need for such a science, it did not attain genuine scientific status as a basic science.

It is impermissible to deny the great contribution to the development of economic thought by such nearly contemporary scholars as Samuelson, Nikaïdo, Marishima, Dornbusch, J. Fischer, and J.M. Keynes. . . . The Soviet school added little to the gnoseology of economic processes, but it achieved significant successes in the development of mathematical models (V.L. Makarov, D.S. Lvov, et al.). Contemporary Russian economists are pure pragmatists, and not very good ones. Using the experience of the West, some of them carried out a monetarist policy, paying no attention to the specifics of the real situation in Russia. Another group appealed to “the achievements of socialism” and called for restoring it, with some corrections. Not one economist in the world, however, has yet been able either to predict, or to explain the economic phenomenon of Russia in our time.

The science of physical economy

Physical economy makes it possible to use physical analogies as a predictive instrument for economic research. Although the ideas of physical economy go back to Plato, Leibniz, and Cusa, physical economy is becoming a scientific tendency, recognized by the public, only in our time—because of the inability of traditional economics to solve problems of forecasting, and to the pressure of practical requirements. The representatives of this tendency—L. LaRouche, P. Kuznetsov, et al., have concentrated their attention on prac-

tical, as well as conceptual problems.

(Dr. Mikhailov provides a bibliographical reference to the Russian edition of LaRouche’s book *So, You Wish to Learn All About Economics?*, published in Moscow in 1993.)

Russians seek ‘asymmetric’ advantages in military technology

by Rachel Douglas

Dr. Nikolai V. Mikhailov is a key figure in Russian military science, and anti-missile defense in particular, who is taking a prominent role in current public debates in Russia about the proper military posture, now that NATO “out-of-area deployments” have commenced with the bombing of Yugoslavia. Co-author of the new book, *Foundations of Physical Economy*, Mikhailov has been First Deputy Defense Minister of the Russian Federation since September 1997, with the additional rank of “state secretary.” Before that, he was deputy secretary of the Security Council of the Russian Federation, beginning in July 1996.

N.V. Mikhailov, 62, has worked chiefly on the industrial and technical side of Russian defense. In 1997, he received a State Prize of the Russian Federation “for projects on the creation and development of warning systems against missile attack, space control systems, and anti-missile defenses.” Mikhailov holds degrees as “doctor of economic sciences” and “grand doctor of philosophy.”

From 1986 until 1996, Mikhailov headed a Soviet research organization, becoming a Russian joint-stock company after 1991, called “Vympel” (“Pennant”), which did classified work on radioelectronics and anti-missile defense. In 1993, “Vympel” was identified as one of the initiating organizations for the Russian “Trust” proposal for joint Russian-American anti-missile R&D, presented at the Vancouver summit. As *EIR* was one of the few publications to report at the time, President Boris Yeltsin carried to that very first summit meeting with President Bill Clinton a proposal for cooperative U.S.-Russian development of anti-missile “plasma weapons,” a proposal that, in its key characteristics, reflected the original LaRouche policy-design of a shift to effective defense against nuclear attack, based on scientific breakthroughs. The proposal was announced in an April 2, 1993 front-page *Izvestia* article, headlined “On the Eve of Vancouver—Russia Proposes to the U.S. a Joint Plasma

Weapons Experiment.”

Izvestia writer Viktor Litovkin reported then, “Our country may propose to conduct, on Kwajalein Atoll in the Pacific Ocean, a joint, large experiment on repulsing a missile attack. Russian scientists, who have worked for a long time in top-secret areas of defense, call this experiment ‘Trust’ [‘Dover-iyé’]. Participating in design of the experiment were such scientific and production centers as the Scientific Research Institute of Experimental Physics from the closed city of Arzamas-16, the Central Scientific Research Institute of Machine-Building from Kaliningrad near Moscow, where our best missiles were produced, the Scientific Research Institute of Radio Equipment Construction which is part of the super-secret international joint-stock corporation ‘Vympel,’ leading institutes of the Russian Academy of Sciences, and other collectives.”

The journal *21st Century Science & Technology*, Summer 1993, published an analysis of the “Trust” proposal by LaRouche’s associate Dr. Jonathan Tennenbaum, which concluded, “The Russian offer might be a signal for the United States to break out of the suicidal anti-technology, anti-growth mood of recent years, and to join other nations in rebuilding our troubled world using the best fruits of modern science.”

The “Trust” proposal did not bear fruit, in immediate policy application in 1993. Russian-American relations were tracked into the International Monetary Fund-dominated financial sphere, while science and technology were put under the umbrella of the Gore-Chernomyrdin Commission.

First Deputy Defense Minister Nikolai Mikhailov has contributed several articles to current deliberations on Russia’s military posture. Excerpted here is the most recent one, in *Nezavisimaya Gazeta* of April 30, titled “Weighty Answers to Military Challenges—It Is Possible for Russia To Have a Rational Military-Technical Policy Under Crisis Conditions.” Here, Mikhailov raises the “physical economy” and “strategic defense” themes of the essential role of infrastructure in the economy, the possibility for “asymmetrical” military development—not matching NATO dollar-for-dollar, but focussing on certain key technologies—to provide adequate security for a devastated Russia, and elements of a “science-driver” concept of national economic development. He also sheds light on possible reasons for the participation of Tu-95 “Bear” aircraft in the “Zapad-99” military maneuvers last month (see *EIR*, July 2, p. 70), for the first time in over a decade.

Documentation

The article “Weighty Answers to Military Challenges—It Is Possible for Russia To Have a Rational Military-Technical Policy Under Crisis Conditions,” appeared in Nezavisimaya Gazeta of April 30, 1999. The author is Nikolai V. Mikhailov, State Secretary, First Deputy Minister of Defense of the Russian Federation.

It appears that I made an unforgiveable error, in my [Sept. 24, 1998] article, “Russian Can Preserve Its Status As a Great Power.” Analyzing the major geopolitical changes in the world, which have coincided with the rapid development of both military and commercial technologies, I wanted to believe that these changes would set the stage for a radical revision of views of the nature of possible wars in the 21st century. It seemed that the anticipated shifts would lead, by about 2010-20, from highly destructive wars, toward wars, restricted to functional actions against military forces and capacities, with minimal physical effect on the population.

The character of U.S. and NATO aggression against Yugoslavia, with the large-scale employment of the most advanced means for waging war, leave no hope for the possibility of such an “ennoblement” of the essence of war through the intellectualization of military technologies. On the contrary, the character and possible scale of actions using new military technologies against social and economic infrastructure can place unprecedented tribulations on the shoulders of

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ordinary citizens. . . . It is already clear, that there are many grounds for the immediate adoption of an international convention to ban the use of several such technologies to destroy countries' social and economic infrastructure. . . .

Russia's military-technical policy in crisis conditions

Analysis of the real scientific-technical and economic possibilities provides the basis to say that Russia has good prospects to face up to military threats and challenges in the 21st century. Despite the crisis. Despite the destructive effects in the economy, especially the military-industrial complex, during the past 5-6 years. . . .

History always leaves a chance. . . . It is clear to everybody that our country continues, despite the fundamental loss of its economic position in the world, to occupy a worthy place in geopolitics, science, culture, and education. Our leadership in a number of military technologies has not been lost. Thus, there is a basis for carrying out an active state military-technical policy. This must be focussed on the effective solution of key military-technical tasks for Russia's defense security in the 21st century, in the strategic and tactical-operational spheres.

Key military-technical tasks. . . .

Strategic

1. Global control of the strategic zone of outer space.
2. Reliable ability to hit space-based electronic, optical, and radio intelligence capabilities.
3. Guaranteed determination of the aggressor country, carrying out a nuclear attack on our country or its allies.
4. Reliable suppression of the information components of national anti-missile defense systems, guaranteeing penetration of anti-missile defenses by nuclear- or non-nuclear-armed missiles, and the aggressor country's strategic vulnerability.
5. Highly accurate targeting of intercontinental ballistic missiles and non-nuclear-armed land-, sea-, and air-based cruise missiles, against stationary and minimally mobile targets.
6. Inter-regional air transport of troops during strategic deployment of the Armed Forces. . . .

It may be said with confidence, that there is none of the above-listed [including eight "tactical-operational" priorities, omitted here—ed.] tasks, in which any potential adversary has decisive superiority over Russia. Our most important task is to consolidate that state of affairs, for a minimum of 10-15 years.

I anticipate the voice of skeptics: "How can you seriously talk about accomplishing those tasks, when the ratio of real [defense] budget allocations in Russia and the U.S.A. is 4:279?!" [budget defense spending, expressed in billions of U.S. dollars—ed.]. Anyone who lives by the national interest and values questions of national security would like the ratio to be otherwise. Today we have only what we can allow our-

selves. No more. But even that is sufficient, to look to the future with optimism.

First. . . . The strategic deterrent, created by our people in past years, . . . makes it possible to ensure geopolitical stability in the years ahead. That is why balanced development of nuclear missile weaponry, associated information programs . . . and combat guidance systems for the strategic nuclear forces should remain the highest priority of state, regardless of budget strictures. . . .

Third. The crisis has promoted a concentration of budget allocations only on areas of armaments and military equipment, where we have real possibilities to consolidate our leadership, or on those where potential adversaries have vulnerable sides (the principle of asymmetry). This principle is based on the well-known law, that it is more efficient and economical to exploit the opponent's weak side, than to try to develop one's own strong sides. . . .

Fourth. The talent and foresight of our scientists and engineers have created systems of armaments and military equipment, which have a huge, in some respects unlimited, potential for modernization. This applies to strategic forces . . . as well as tactical-operational forces in all branches of the Armed Forces. Here is a gigantic potential for economizing resources.

Thus, while preserving the mechanical, electric, and information systems of the X-55 cruise missile, a new class of highly accurate weapon may be created by replacement of its warhead and redesign of its hardware compartment, to accommodate a highly accurate optical guidance system. This radically extends the combat capabilities not only of the strategic Tu-95 and Tu-160 aircraft, but also gives new capabilities to the Tu-22M and front-line combat aircraft. Modernization of the X-22 missile makes possible a 50% increase of its range and nearly doubles its speed and altitude of flight, . . . adding maneuverability. . . . Modernization costs four to five times less than new designs. . . .

Seven. We are only at the threshold of putting the intellectual property and dual technologies, accumulated at military-industrial complex companies, into economic circulation. In the context of rational restructuring, this sector can free up a huge potential for development. . . . With all the irreparable losses and negative consequences, the economic crisis and the degradation of the military-industrial complex create conditions that may allow us to free ourselves from obsolete dogmas and inertia in our thinking. . . .

I anticipate possible reproaches for excessive optimism in this article. I am ready to accept them, believing that today our greatest deficit is precisely a deficit of constructive optimism. . . . A rational state military-technical policy today can be a powerful factor for the stability of our national security, and a factor in the rebirth of the military-industrial complex, through which the shortest route lies to the activation of the industrial policy and technological independence of Russia.