

Russia's Scientists Focus On LaRouche And Vernadsky

by Rachel Douglas

Moscow's Vernadsky State Geological Museum held a Nov. 27-28 scientific conference, "The Realization of the Concept of the Noösphere in the 21st Century: Russia's Mission in the World Today," at which Lyndon LaRouche's economic science was the center of attention.

Co-sponsored by the Museum (part of the Russian Academy of Sciences) and the Schiller Institute, the conference heard LaRouche's new paper, "The Spirit of Russia's Science" (published below). Russian economist Andrei Kobayakov, of Moscow University and the journal *Russian Entrepreneur*, read aloud an abridged Russian translation, which then figured in discussions throughout the two days.

With Schiller Institute representatives Jonathan Tennenbaum and Karl-Michael Vitt participating, two central themes of LaRouche's ongoing dialogue with the Russian intelligentsia were debated. First, was Russia's mission in current world history, as a uniquely Eurasian nation and one of the few powers whose leadership thinks of shaping events on a world scale. Second, and bound up with the first, the legacy of the great Ukrainian-Russian scientist Vladimir I. Vernadsky (1863-1945); this legacy is essential to Russia's fulfillment of that mission. Vernadsky coined "Biosphere," and "Noösphere," the sphere of activity of the powers of the human mind.

The meeting hall of the State Geological Museum, located in central Moscow close to the Kremlin, was filled by some 50 leading Russian scientists, including physicists and biologists. Among them were many students and collaborators of the late Pobisk G. Kuznetsov, the maverick chemist and industrial-organization specialist, who inspired a generation of Soviet and Russian scientists to think in unconventional ways. Kuznetsov, who was LaRouche's friend, passed away just one year ago. Dr. Sergei Glazyev, chairman of the Committee on Economic Policy of the State Duma (Parliament), gave one of the main presentations on the first day of the conference.

The "Noösphere" conference focussed on building the infrastructure projects



Lyndon LaRouche's work is the subject of intense scrutiny in Russia. Here, he speaks at an event in June, at the Lebedev Institute of Physics of the Russian Academy of Sciences.

of the Eurasian Land-Bridge. As a road to the future, it stands in stark relief against today's world financial meltdown, made more dangerous by the prospect of a "Clash of Civilizations" after the terror attacks of Sept. 11 and the war in Afghanistan.

Land-Bridge: The Noösphere Realized In The Economy

Dr. Tennenbaum, who opened the conference and greeted the participants, spoke during the first session, on "Eurasian Infrastructure Development and the Noösphere Principles of Physical Economy." He presented LaRouche's conception of the Eurasian Land-Bridge in the context of the global economic crisis and the need for reform of the monetary system—all, from the standpoint of the Noösphere, the domain defined by human cognitive activity. Tennenbaum discussed Vernadsky's concept of the Noösphere, from the advanced standpoint of LaRouche's Science of Physical Economy, focussing on the apparently simple idea, the human increase of "potential relative population density," which is really one of the most profound concepts in science. "The creation of a network of infrastructure corridors in Eurasia—and analogous projects in other areas of the world," Tennenbaum stressed, "cannot be seen merely as a commercial undertaking. In combination with certain measures to stimulate scientific and technological progress, these projects provide the

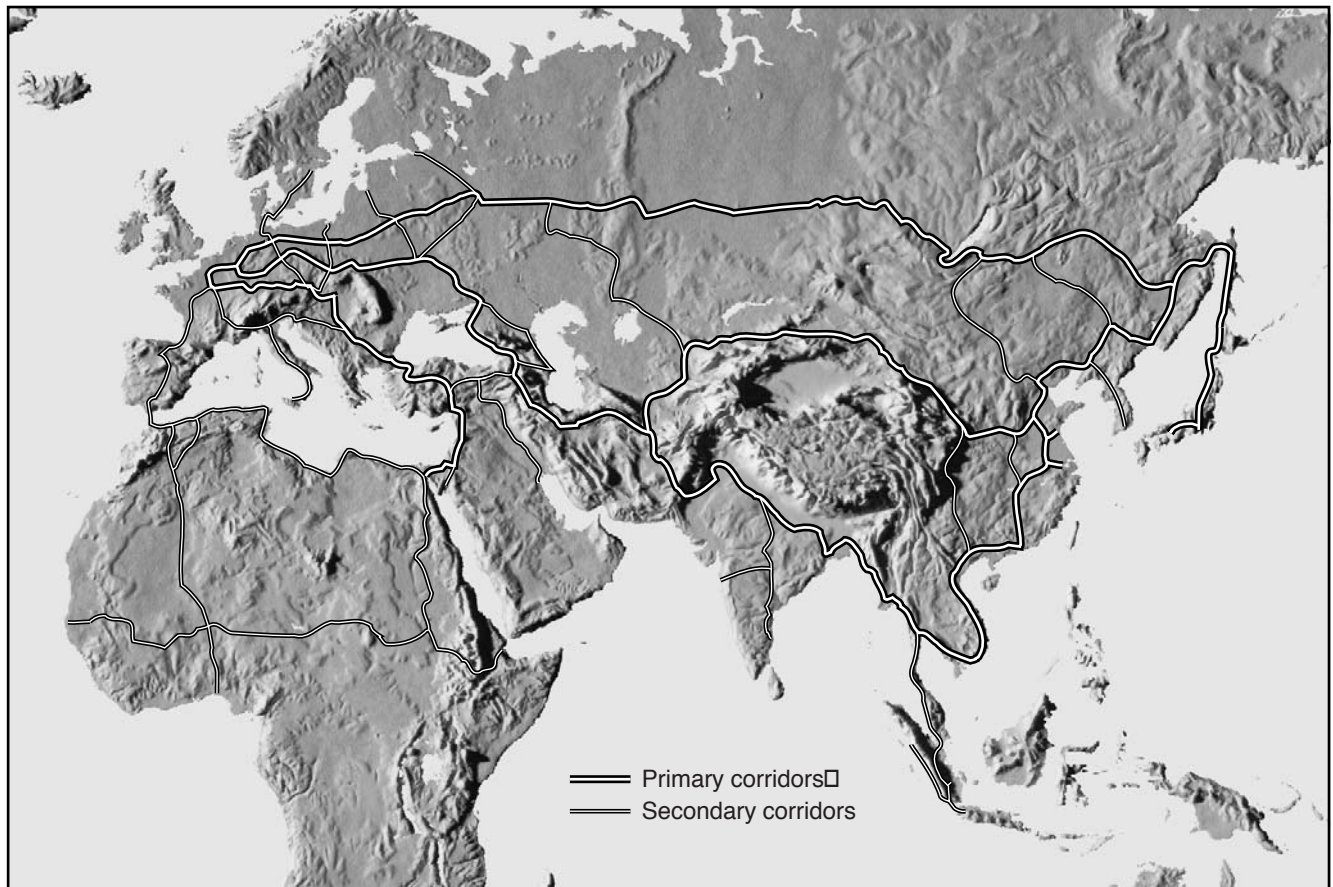
most efficient means to reverse the current 'entropic' degeneration of most of the world's physical economy, and to restore real growth in agreement with the requirements of the Noösphere."

Two prominent Russian speakers then took up the Eurasian infrastructure corridors. On Nov. 27, V.G. Popov of the Moscow State Railways University forecast "The Role of International Railroad Transportation Corridors in the Modernization of Russia in the 21st Century." Of the different available economic strategies available to Russia, he said, the one chosen in the 1990s was the wrong way, leading to the looting of capital and loss of manpower from the Russian economy. In order to reverse that process and shift back to economic development, Popov said, the modernization of infrastructure plays an essential role. Exemplary is the Trans-Siberian Railroad (TSR), which has a key function in the Russian economy and can be best looked at in the context of Eurasian development. Among the potentials of the TSR discussed by Popov, and also mentioned by President Vladimir Putin at the recent Asia-Pacific Economic Cooperation Forum (APEC) in Shanghai, is Russia's interest in accepting greater freight flows from the United States through Russia's Pacific ports.

Keynoting the second day of the conference was Academician V. Myasnikov, the noted Sinologist from the Academy of Sciences Institute of the Far East, who also heads the History Division of the Russian Academy of Sciences as a whole. Prefatory to his presentation on the Eurasian Land-Bridge

FIGURE 10

Some Main Development Corridors Of The Eurasian Land-Bridge



today, Academician Myasnikov drew attention to the close relationship between Count Sergei Witte (1849-1915), the father of the first Eurasian Land-Bridge (i.e., the TSR), and Vernadsky. Both were members of the Academy of Sciences at St. Petersburg, and though Vernadsky was a generation younger, he experienced significant influence of Witte’s work upon his philosophical views.

Progress Means Rail Rebuilding

Today, said Myasnikov, the clash between wars and extremism, on the one side, and the unity of mankind, on the other, must be solved by means of progress, and railroad-building is a key instrument of progress for economic revival. He listed an array of projects, from the prospective link-up of the Korean Peninsula’s railroads to the TSR, to the soon-to-be-built rail bridge from Sakhalin Island to the mainland. The TSR is already being upgraded, including with increased electrification (Russia has the greatest mileage of electrified train lines in the world). The recently constructed rail bridge at Khabarovsk is another feat of engineering. By the TSR, freight can be shipped from the Pacific port of Nakhodka to

Brest, in 11 days. Satellite monitoring allows the location of any container at any moment. Myasnikov expressed confidence that the Korea hook-up will go ahead, despite political controversies around it.

Myasnikov also developed the importance of the North-South Corridor, agreed upon by Russia, Iran, and India, and the Second Transcontinental Eurasian Land-Bridge from Lianyungang in China to Europe. Neither of these lines represents a “contradiction” or a competitive threat to the TSR, he said, polemicizing against a view that is widely held in Russia.

Beyond these projects, Myasnikov said that railroad-builders should go for new technologies. Magnetic-levitation train lines all the way from Asia to Europe, will pull the vast regions in between, into the process of development. These projects require costly investments, he acknowledged, but the Schiller Institute is right to say that they are the pathway to the future. There should also be a rail line across the Bering Strait, as was discussed between Soviet Russia and the United States in the early 1920s, and is now being revived as a project. There is also a plan for another south-north rail corridor, Hong Kong-Beijing-Zabaikalsk, which Myasnikov pointed out will

bring the Association of Southeast Asian Nations more into the Eurasian development process. He also reported on the role of Iran in Eurasian infrastructure, and on the upgrading of the Baikal-Amur Mainline.

Myasnikov's concluding remarks, about how these prospects may be jeopardized by the Russian government's continued pursuit of various privatization schemes (i.e., the policies of Economic Development and Trade Minister German Gref, in particular), referred to the break-up of the Railways Ministry, aspects of the planned reorganization of the Academy of Sciences, and other such schemes. His conclusion touched off an agitated discussion at the conference. Some participants questioned whether the infrastructure projects themselves were not part of a plot from abroad: Aren't railroads being built only to loot resources? Didn't building the TSR trigger the Russo-Japanese War? Didn't Hitler have a grandiose scheme for Eurasian rail development? Aren't foreigners planning to seize these regions? Myasnikov calmly replied, that he knows these regions very well, and that anyone serious about maintaining and increasing a Russian population there, must back these plans for economic development.

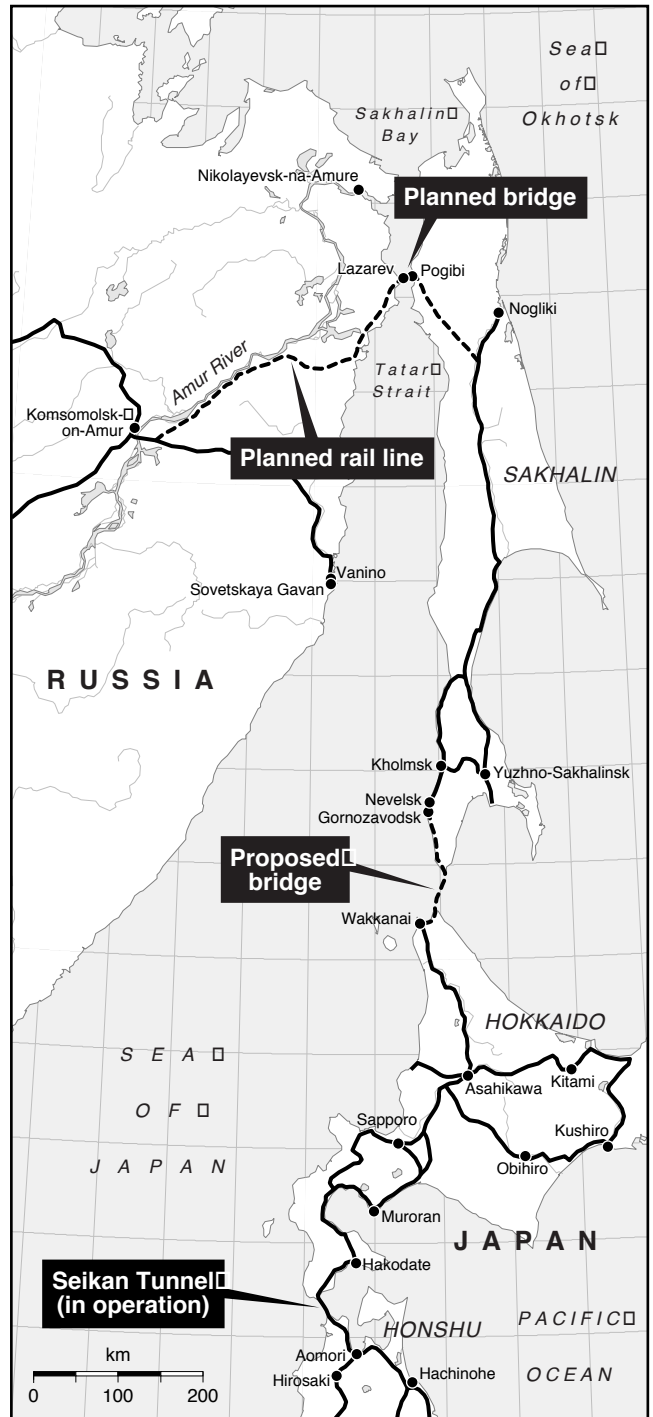
The Curses Of Monetarism And Malthusianism

Throughout the conference, the need to fight for cultural optimism, in the face of the devastation Russia has experienced in the past decade, was discussed. What is the nature of economic development, what are its limits, and are there levels or rates of development that are impractical to strive for? These debates began from the very first presentation by Oleg Kuznetsov, who is President of the Russian Academy of Natural Sciences and Rector of the Dubna University of Nature, Society, and Man. He spoke on "Principles of a Theory of Sustained Development of Socio-Natural Systems." Dr. Kuznetsov looked at the Noösphere as the domain of generating programs of technological development. He reported that the works of LaRouche are being closely followed at his university, with special attention to the essay "Letter to a Russian Friend: Russia's Relation to Universal History" (*EIR*, Nov. 29, 1996), which has been circulated on the Russian Internet during the past year.

D.V. Rundkvist, head of the Vernadsky State Geological Museum, and his associates G.V. Kalabin and Sergei Cherkasov, then gave a shocking overview of the situation of natural resources in Russia, since the time when decisions were made to make the Russian economy serve chiefly as a raw-materials exporter. They documented the ravages of privatization. Their geological survey of Russia's resources—where they are produced and where they are used—revealed the collapse of domestic consumption of raw materials; they are exported instead. The State Geological Museum team called for creation of a new national agency, to regulate the use of raw materials.

The discussion of Russia's prospects in the 21st Century

FIGURE 20
Sakhalin Island, Future Bridge Between Japan And Eurasia





During LaRouche's first visit to Moscow, in April 1994, he addressed Pobisk G. Kuznetsov's "President" program, at the Russian Academy of Sciences. Here, Kuznetsov (right) listens to LaRouche's presentation. Kuznetsov, who passed away a year ago, inspired a generation of Russian scientists, including many of those in the audience at the Nov. 27-28 conference on the Noösphere.

grew intense when a senior scientist, whose father had worked with Vernadsky and who himself, as a boy, had known Vernadsky, introduced a critical note. He suggested that Vernadsky believed "too much" in human reason. After all, he said, there is a "positive Noösphere" and a "negative Noösphere," the latter being demonstrated in the often destructive effects of human activity. Vernadsky ignored the "negative Noösphere," he asserted, because he and his whole generation worshipped Science, almost as if it were a deity. Jonathan Tennenbaum replied by noting that Vernadsky's discussions of the Noösphere, brimming with optimism, were written during World War II, during Russia's life-and-death struggle against fascism! How comes it, he asked, that our generation—which has *not* lived through that devastating process, succumbs more easily to cultural pessimism, in contrast to the optimism of Vernadsky?

Russia's Mission

Dr. Sergei Glazyev, Chairman of the Russian State Duma's Committee on Economic Policy, visited the conference on Nov. 27 to make an impassioned speech on Russia's mission in the world. Glazyev greeted the conference on behalf of the State Duma, noting that the results of this event will be taken under advisement by the Russian parliament. Turning to the mission of Russia, Glazyev recalled that Russia has more than once been the nation that "saved the world from chaos"—as during the Napoleonic Wars, and in World War II. Despite the damage of the past decade, Russia is still a great nation, and its economy is one of the world's largest.

Glazyev then blasted globalization and the attempt to eliminate the sovereign nation-state, deriving profits by looting national economies. The huge financial pyramid, built up since 1971 through the U.S. Federal Reserve System's printing of dollars, is no longer stable; any serious shock may crash it. LaRouche's forecast of a gigantic financial crisis this Autumn was right, Glazyev said, but the events of Sept. 11 prevented groups of nations from taking action to deal with it. Moreover, he warned, some of the key nations that have campaigned for a multi-polar world, are now being targetted as "terror"-sponsoring countries. He said that a world order, subservient to this sick financial system, would be a move away from the Noösphere, destroying nations and precluding normal economic activity.

The task of overcoming the crisis is difficult, because there are powerful interests behind the present financial order, but we must deal with it, Glazyev said, and move to "an economy of scientific and technological progress," wherein knowledge is the primary resource. He argued that Russia has a cultural affinity to such concepts as "the Noösphere" and "the common good," because of the primacy of the spiritual over the material in Russian culture. We must come through this turbulent period, Glazyev said, and Russia has a great role in determining a future, which is more successful than what has come before.

Asked what should be done, "if the U.S. dollar crashes tomorrow," Glazyev replied that the dollar's crash might not come "overnight," but it is inevitable, and therefore, already now, it is appropriate to begin to use national currencies and



Conference participants (left to right) Dr. Sergei Cherkasov of the Vernadsky State Geological Museum; Dr. Jonathan Tennenbaum of the Schiller Institute; Dr. Sergei Glazyev, chairman of the Committee on Economic Policy of the Russian State Duma; Dr. Andrei Kobayakov, of Moscow University and the journal *Russian Entrepreneur*.

restore sovereignty. He said that Russia has certain relations with Europe, which are relevant in this regard, but there is also potential for a ruble-yuan-yen currency zone of cooperation. On the question of new sources of financing, Glazyev brought up the idea of a Russian Development Bank.

Frontiers Of Science

Dr. B.M. Vladimirovsky from the Crimean Astrophysical Observatory in Ukraine, took the conference to the frontiers of physical science. He asserted that current scientific work will lead to momentous experimental discoveries, whose impact should begin to be anticipated now.

Vladimirovsky identified three such areas: 1) The discovery of a far closer relationship, than previously recognized, between the immediate environment of the Earth, i.e., the solar system, and processes taking place outside the solar system or even extra-galactic processes. There is evidence of a continuous exchange of matter between the solar system and the areas outside the solar system; thus, the solar system is not the set of balls moving in a vacuum, which most people imagine. 2) The effects of very low-frequency oscillations in the Earth's magnetosphere, on the biosphere, and on human health. It is increasingly recognized, Vladimirovsky said, that an organism responds to extremely small changes in the magnetic environment—so small, that according to generally accepted physics, they should have no effect on anything. 3) The correlation of processes in the biosphere, with various solar cycles (including sunspots, solar flares, storms in the Sun, and the behavior of the planets). Vladimirovsky called for a new conception of these relationships, invoking Kepler's demonstration of the solar system as a harmonic system. The biosphere is a part of that harmonic system, he said.

A team from Dubna University sparked controversy with a presentation on new water-treatment technologies, which they maintain will lead to vastly increased productivity in

agriculture. Objections from the floor, along the lines of "That's impossible!" led to a discussion about looking at such processes differently for living systems, than in non-living matter. These presenters attacked the Club of Rome, calling for great increases in food production. They cited LaRouche's memo, "The Vernadsky Strategy" (*EIR*, May 4, 2001), and, when they showed a graph of the leaps in agricultural productivity and economic function, projected on the basis of introducing their techniques, they used the unit "La"—the "LaRouche," introduced by Pobisk Kuznetsov some years ago to express potential relative population density for a given economy.

Dr. G.V. Naumov of the State Geological Museum, speaking on "The Axioms of the Concept of the Noösphere," took up the theme of cultural and scientific optimism, which he demonstrated with quotations from Vernadsky. He developed Vernadsky's concept of scientific method, according to which empirical "facts" mean nothing, except as they are subject to scientific conceptions. And, scientific conceptions change. With a scientific revolution, the same "facts" obtain new meaning. An example is the revolution in the concept of radioactivity, which Vernadsky lived through.

Naumov then went through Vernadsky's ideas:

- the unity of nature, and the truth that each of its parts, even a raindrop, reflects the whole Cosmos;
- the distinction of living and non-living matter—Naumov stressed that the space-time in which living matter exists is *still* not understood, even many decades after Vernadsky posed this question;
- man as a geological force (he noted that while volcanic activity brings 25 cubic kilometers of matter up from the core of the Earth each year, 100 cubic km is removed by human mining activity);
- the nature of human intelligence, which is neither matter nor energy, but acts as if it were;
- the importance of being a student of nature, and searching for the truth.

During the wide-ranging further discussion of the Noösphere in the 21st Century, LaRouche's work was invoked many times. The noted physicist Lev Golubchikov, who administers Russia's fusion energy research program for the Ministry of Atomic Energy, rose to make an intervention about the importance of technological revolutions. Addressing the considerable debate that had taken place over the "precise scientific definition" of the Noösphere, Dr. Golubchikov said that the place to get the answer to that question was in the new book *The Economics of the Noösphere*, by Lyndon LaRouche, which he held up. This is a book, he exclaimed, which everybody must read.

Debating the question of "sustainable development" (Russian: "stable, or sustained, development"), some Russian scientists objected to the intention to invest in new energy sources. This is not necessary, one of them argued, since there would be plenty of fuel available, if existing resources were merely used more efficiently. Tennenbaum replied by reminding them that man is a creature of cognition, who *must*

live in a world of scientific discovery; and that engagement in scientific discovery is the necessary environment for the human species, without which human society cannot prosper. Many of the Russian participants were very touched by this polemic.

In rebuttal of the notion of an inevitable "Clash of Civilizations," the October 2001 appeal from Schiller Institute founder Helga Zepp-LaRouche (*EIR*, Oct. 26, 2001) for an international correspondence on the "Dialogue of Civilizations," was read aloud to the conference in Russian. Academician Myasnikov also spoke to this point, referring to recent productive, high-level talks among Russia, India, and China.

The first day of the conference concluded with a concert, given by musicians from the Moscow Conservatory. A Haydn trio for oboe, flute, and 'cello was followed by various piano pieces, and songs by Mozart and Rossini, as well as traditional Russian songs. The conference adopted a resolution, which attacks monetarism and Malthusianism.

Relations With Europe As The Crisis Deepens

Schiller Institute representatives Jonathan Tennenbaum and Karl-Michael Vitt also took part in the annual Ambassadorial Reception, held by the Russian organization Federal Appraisal Foundation (FFO) on the evening of Nov. 28. This year's topic was "The Development Of Financial Relations Between European Countries And Russian Business Circles," on the eve of introduction of the cash euro. Bankers, businessmen, and representatives of other institutions, including several foreign embassies, were in attendance.

James Wright, representative of the European Commission in Russia, briefed them on the inauguration of the euro. Following Wright, Andrei Kobayakov of *Russian Entrepreneur* gave a devastating account of the international financial crisis, which is driven by the U.S. Federal Reserve's liquidity-pumping.

Tennenbaum devoted his remarks to the importance of regional economic cooperation, including in the monetary realm, in support of real economic activity. He outlined long-term cooperation through development of the Eurasian Land-Bridge. Given the dimensions of financial defaults already under way, it is clearly time to move to a new system, such as LaRouche has put forward. Within this, Tennenbaum said Russia has plenty of room for coop-

eration with Europe, but also with the nations of Asia, and with the United States—since the Fed's policies are destroying the U.S. economy, too.

Dr. Sergei Glazyev spoke here, as well, on the inevitability of world financial collapse. The leading Duma economist said that the military mobilization after Sept. 11 had temporarily stabilized the dollar, but not for long. The Federal Reserve System's practice of unlimited cash emissions inevitably leads to hyperinflation. But, Glazyev warned, the situation immediately ahead cannot be reduced to a fight between the United States and Europe, in which Russia should somehow jockey for position. The fight is not between the United States and Europe; it is between the oligarchy and the interests of all mankind. The Federal Reserve System does not represent the national interests of the United States, but is the tool of a clique of financiers.

As for the euro, Glazyev said that shifting into use of the euro has its proper place—in the denomination of trade between Europe and Russia. (Glazyev has previously called for conducting such trade in euros and in rubles, making the ruble into a "reserve currency on the scale of Eurasia.") In general, there should be a return to the use of national currencies. The Chinese yuan is a stable currency, and is gold-backed. The Indian rupee is a stable currency. Asian moves towards the establishment of stable currency relations should be welcomed.

Calling for a "just order" in economic affairs, Glazyev stressed again that the Federal Reserve System is a supranational institution, and that the American population will be a chief victim of the dollar crash.