

EIR Global Development

The New Silk Road: Eurasia in the 21st century

by Jonathan Tennenbaum

This speech was given to the conference of the International Caucus of Labor Committees and the Schiller Institute in Eltville, Germany, on Dec. 11. Dr. Tennenbaum is director of the Fusion Energy Forum in Germany.

Many people in Germany remember the national television spot which Helga Zepp-LaRouche made for the election campaign of the Civil Rights Movement Solidarity. In that short spot, she said many important things, but what really stuck in the minds of most people was the *metaphor* she used when she called for building a "New Silk Road," a network of high-speed rail and maglev lines across Eurasia, from the Atlantic to the Pacific. For months after that television show, people on the streets would say, when they heard the name Helga Zepp-LaRouche, "Oh, yes. She is the lady with the New Silk Road!"

"The New Silk Road" is not just a nice slogan. She sounded a theme which is deeply embedded in the history and culture of our civilization. And I think it is worthwhile to reflect on what is implied in that, and to review the tasks in front of us, in rebuilding Eurasia and the world economy as a whole, as it were from a mountain-top of history, against the background of great and tragic events which shaped the world in which we live.

The original breakthroughs in production of silk and silk garments are considered to have been made in China at least 6,000 years ago. By the so-called Spring and Autumn period of Chinese history (700-400 B.C.), well-established trade routes were bringing large quantities of Chinese silk and other goods to the West. At the time of Confucius (551-479 B.C.), there was already a thriving trade along the so-called Prairie Route, through North China to the shores of

the Aral and Caspian seas, and via the Black Sea, all the way to the Mediterranean. Another route ran to the south from the Yellow River Basin of Sichuan Province into Burma, India, and Pakistan, through Iran, to Baghdad and Tyre, Sidon, and Antioch on the eastern Mediterranean coast. The trade route most commonly referred to as the "Silk Road" was opened up later, around 120 B.C., through the travels of Zhang Qian, an envoy of Emperor Wu Di of the Western Han Dynasty; this route runs from the great capital city of Xi'an on the Yellow River, through present Gansu province, and splits into three alternative routes to make the difficult and dangerous crossing into Central Asia. One route passed via Hami north of the Tianshan Mountains, following roughly the route of the today's so-called Second Eurasian Land Bridge into what is now Kazakhstan, and from there along the shores of the Aral and Caspian seas to Byzantium. The two others crossed the legendary Taklamakan Desert, passing from oasis to oasis along the northern and southern rims of the surrounding mountains.

Actually, if we put together the branches and interconnections of these "Silk Routes" with other major trade routes, what we get is the picture of a comprehensive trade network which embraced practically all the main population centers in Europe and Asia more than 2,000 years ago, and extended into Africa also. A world economy!

The so-called Siberian Fur Route, which goes back at least to the 4th century B.C., was an integral part of this ancient trading network. The Fur Route began from the Ural Mountains at the location of the present city of Tobolsk, where it was connected to trading routes leading south to the mouth of the Don River, to the West via the region of Suzdal and Moscow to Smolensk and Kiev, and north to Novgorod

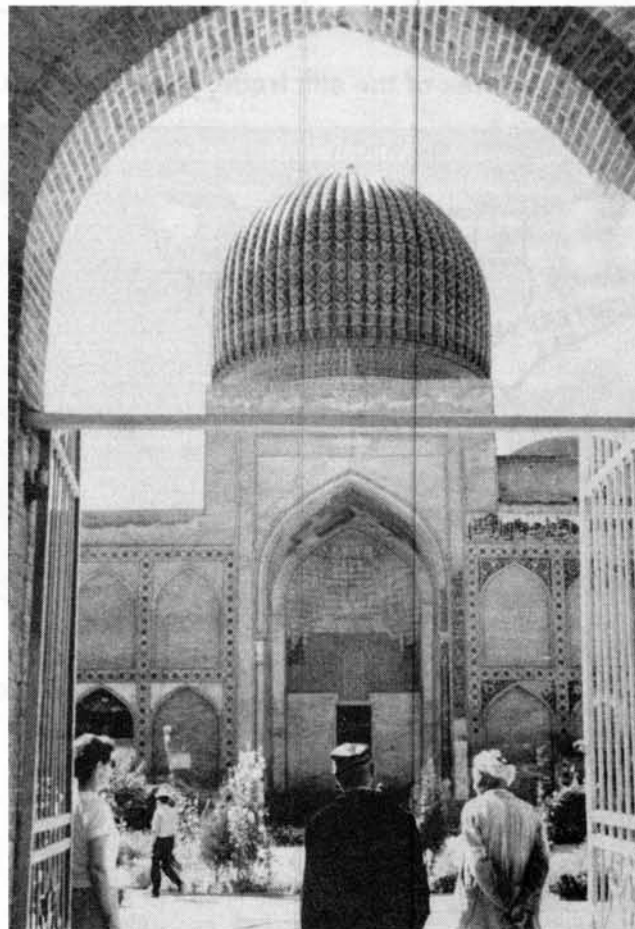
and the Baltic Sea. The western side of the Fur Route thus linked up with the great north-south corridor from the Black Sea to the Baltic, around which the civilization of Kiev Rus developed, and the famous Amber Roads (Bernsteinstrassen) running into present-day Germany. From Tobolsk, the Fur Route ran eastward through the area of Tomsk to Irkutsk and through the Gobi Desert all the way to the region of Beijing in Northeast China. About 2,300 years later, the Trans-Siberian Railroad was built under Count Sergei Witte. With the construction of a rail line from Ulan Ude on the Trans-Siberian Railroad, running through Ulan Bator and the Gobi Desert of Mongolia down to Beijing, a rail connection from China to Europe was established, which became known in China as the First Eurasian Land Bridge.

The sea routes of silk trade are very ancient and appear to go back at least as far as the land routes (Figures 1 and 2). By the time of the Roman Empire, there were sea traders of the most varied nationalities all along the coasts of China and India, and very early, the silk trade encompassed the islands of Japan in the east, Indonesia in the south, and the east coast of Africa all the way down to Mombasa. The use of the magnetic compass appears to have been a standard practice in China, long before Europe. A Chinese document from the year 1117 reports that large ships, carrying several hundred passengers, were required by law to take magnetic compasses for navigation in case of bad weather.

From the very beginning, the Silk Route and its continuations in all directions was closely associated with the rise of thriving urban centers all over Eurasia, and of a cosmopolitan urban culture, which, already 2,000 years ago, assimilated and transmitted cultural influences all across Eurasia and much of Africa. The urban culture of Greece, for example, was spread by the city-building campaigns of Alexander the Great, all through Central Asia and eastward all the way to the Indus River.

More than a thousand years ago, at the time of the Tang dynasty, which included the period when Charlemagne reigned in Europe, the Chinese city of Xi'an had a population of 1 million inhabitants. On its streets you could meet Persians, Arab traders, Indians, Jews, Japanese students coming for studies at the imperial college, and emissaries from dozens of distant lands. But the greatest architectural jewels of the Silk Road were doubtless the Central Asian cities such as Bukhara and Samarkand, where the great Ibn Sina was born.

The Arab renaissance, indeed, brought a tremendous expansion in trade throughout nearly the whole Eurasian system. Arab traders travelled all the way from the eastern coast of China to North Africa and the western coast of Spain. During that time, many of the trading cities of the Silk Road, in Central Asia and elsewhere, became fabulously wealthy. The trading routes were at the same time the main channels for the spread of learning and technology. The Chinese are proud of the "Four Great Inventions"—gunpowder, the magnetic compass, paper-making, and book-printing—which



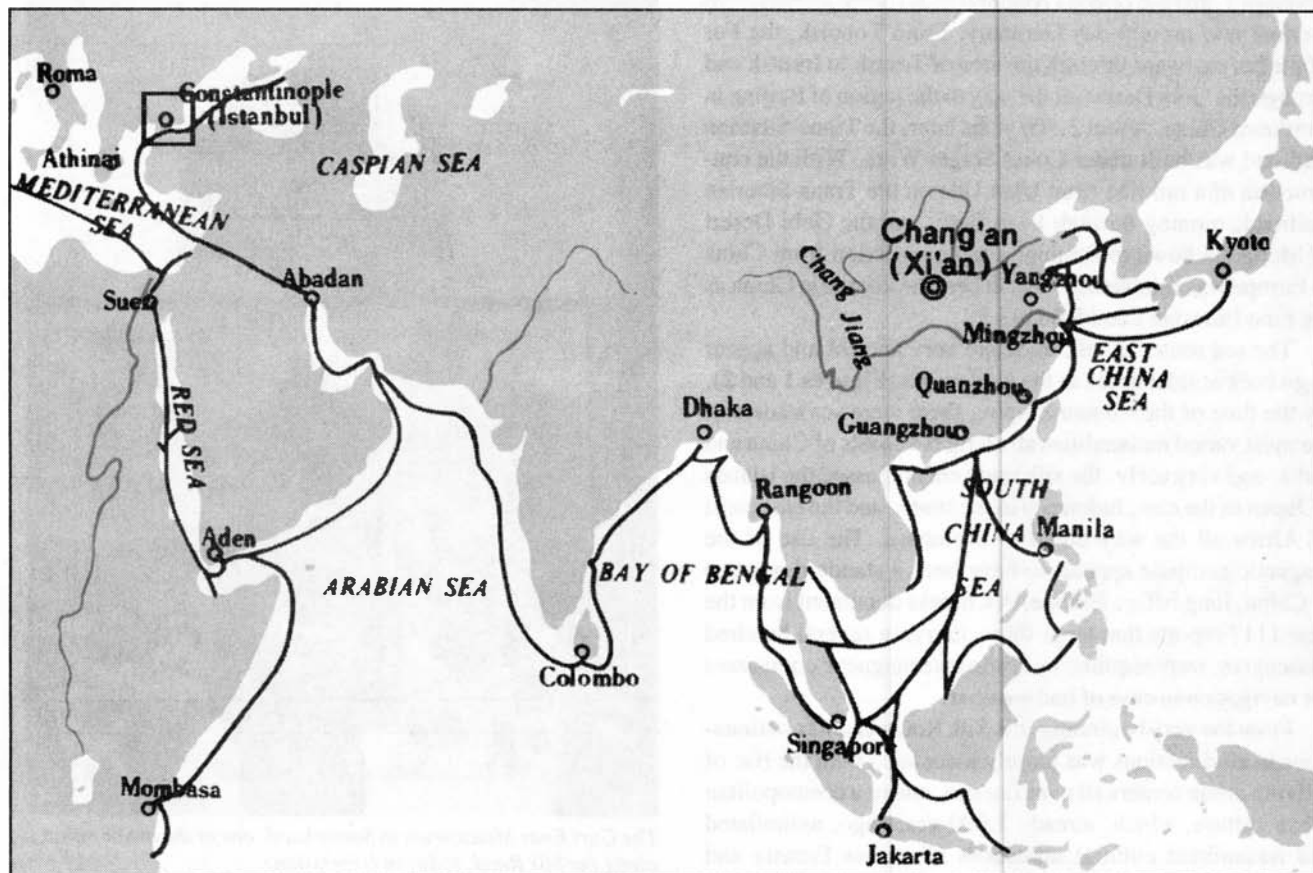
The Guri Emir Mausoleum in Samarkand, one of the major cities along the Silk Road, today in Uzbekistan.

In this section

The Schiller Institute and the International Caucus of Labor Committees met in Eltville, Germany on Dec. 10-11, for a conference on the theme of "Global Reconstruction: Economic Recovery and the Cultural Renaissance." Over 500 people participated, from 28 nations. The keynote speeches of Lyndon and Helga LaRouche are printed in the *Strategic Outlook* section of this issue. Here, we select two additional speeches from the conference which give an in-depth look at the history of the fight for economic development in Eurasia and Africa, and at the application of Lyndon LaRouche's economic method to those areas of the world. Following the speeches, you will find two succinct statements by LaRouche: a definition of the term "basic economic infrastructure," and a discussion of the term "physical economy."

FIGURE 1

Main sea routes of the silk trade, circa 1100 A.D.



Source: *The Silk Road on Land and Sea*, China Pictorial Publishing Co.

spread from China to the West via the Silk Road. But at the same time, the trade routes were the focal point for all kinds of political intelligence operations, and for the rise of great oligarchical financial houses based on speculation and usury.

The rise of Venice

Indeed, the later history of the Silk Roads and the other Eurasian trading routes is, unfortunately, inseparably connected with the rise of Venice, which became the world center of East-West trade. Beginning certainly no later than the Golden Bull of 1082, which gave Venice virtual control over the trade of the Byzantine Empire, Eurasia became the scene of an accelerating sequence of disasters, caused or aggravated by the geopolitical manipulations of the Venetians. This bloody history includes much of what went on during the Crusades, among other things.

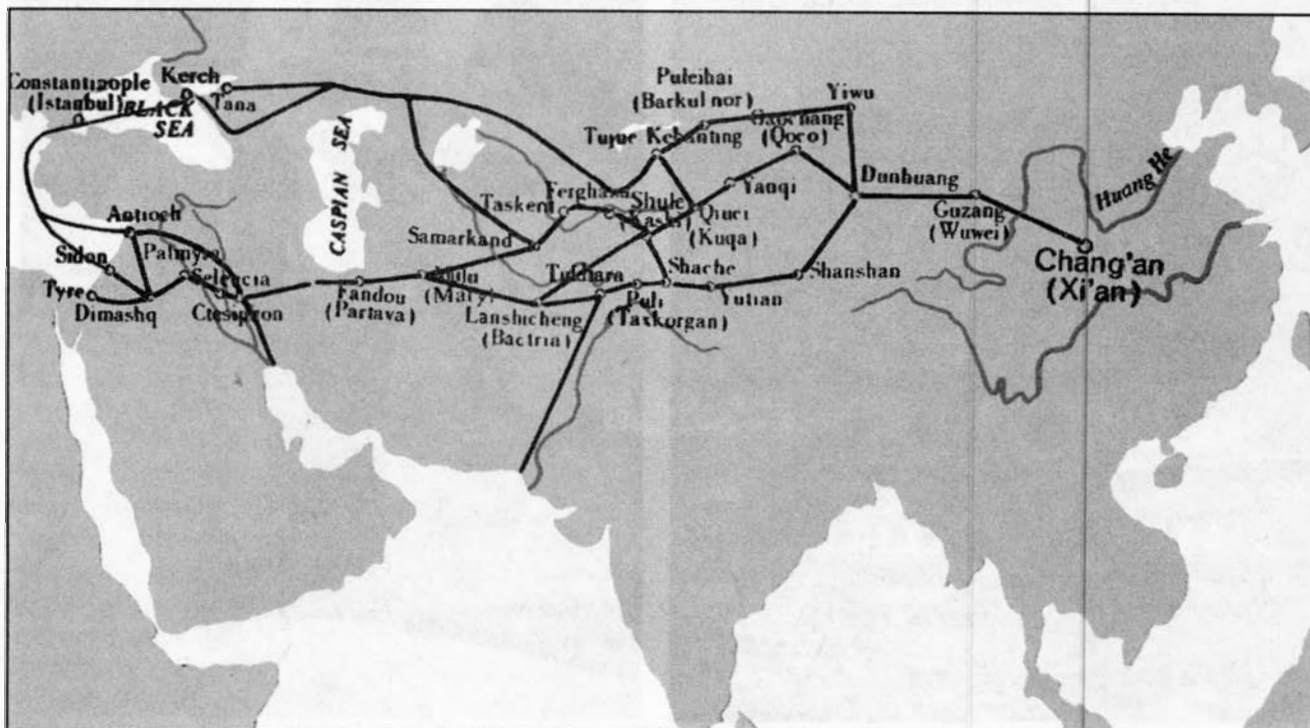
The climax of that series of disasters was the unprecedented holocaust which began with the Mongol-Tatar conquests of China, Central Asia, and Russia; and continued through the great famines of the early 1300s, the collapse of

the vast financial system associated with the Bardi and Peruzzi in 1327-43, and the epidemic of plague (the Black Death) which spread along the trade routes from China to the west and depopulated much of Europe, Asia, and parts of North Africa in 1347-50. Eurasia as a whole, and especially Russia and a great part of what much later became the Soviet Union, never fully recovered from the economic and cultural devastation of the invasions and the centuries-long enslavement which followed.

The Mongols' destruction of Eurasia's most beautiful and prosperous cities was often so complete, that it could only be compared to the effect of a nuclear war. Often, the entire population was slaughtered, except for some who were used as human shields for the battles that followed. Kiev was virtually wiped off the map; Vladimir, Cuzdal, Rostov, and Moscow were looted. Samarkand, the largest and richest city of Central Asia, was totally destroyed and its inhabitants killed off. The once-great Baghdad was captured and sacked in 1258. The population of China was reduced by one-half, and the combination of famines and the plague wiped out

FIGURE 2

Main land routes of the silk trade, circa 1100 A.D.



Source: *The Silk Road on Land and Sea*, China Pictorial Publishing Co.

around half of Europe's population.

Paul Gallagher and others are doing some important research on this. I have not seen the history book which tells the real story of how that holocaust really happened. But it has the stink of Venetian treachery all over it. How could it happen that a barbarian people from the thinly populated steppes of Mongolia, could suddenly appear on the scene armed with the most modern assault cannon and other weapons, possessing the most detailed information on the internal situation in every country? How was it that the Genghis Khan and his successors seemed to have spies in every European court? Who was it that made sure, by disinformation and intrigues, that no effective resistance could be organized among the vastly more populous and culturally advanced nations in Europe and Asia? And how did it happen that Marco Polo, his father before him, and other members of leading Venetian merchant families were so warmly welcomed in the courts of the Mongol rulers? Marco Polo was made an official of the Mongol Empire, ruled the Chinese city of Yangchow, and ran various sensitive missions for the Mongol Khan. And what happened to the vast wealth that the Mongol occupiers extracted from half of the Eurasian land mass, with their refined system of looting by exorbitant tributes and taxes? What happened to the silver which was

sucked out of China when the Mongol rulers imposed a paper currency and then devalued it, step by step? Is it not the case, that a monstrous bubble of usurious debt and speculation had grown up on top of the Eurasian economy, and that a fascist "marcher lord" was needed to prop up the bubble by terrorizing the nations and looting much of the surviving population of Eurasia under concentration camp-like conditions?—a bubble which finally burst in the first decades of the 14th century, leaving a devastated population ripe for the ensuing Black Plague?

Now, looking back at that holocaust, is anyone *insane* enough to tolerate what the British and their dupes are doing to the world today? I say to those people in Russia and elsewhere, who are playing along with British geopolitical games, like the new Triple Entente: "Don't you remember what was done to you once?"

There is an old Chinese fable for this, called "For tiger become devil." A man was killed by a tiger, and he changed into a devil. His spirit was still so *terrified* by the tiger that he did everything to help the tiger do evil things. He helped the tiger trap and kill other poor victims and pulled their bodies apart so the tiger could eat them conveniently. He became a devil out of fear. Doesn't that remind you of some people?



Two great products of modern science: Brunelleschi's dome over the Cathedral of Florence, completed in the mid-15th century; and electricity coming to a village in Russia in 1925.

So the same old Venetian games are pushing us to the brink again! But this time, instead of the Black Death, we might have a combination of HIV and other microbes that spread rapidly as an aerosol-transmitted form of AIDS. If that happens, the next holocaust might not have *any* survivors.

Create a new Renaissance

But, there are no great "Kondratiev cycles" which fatalistically determine the rise and fall of civilization. Collapses are neither inevitable, nor do they automatically lead to a recovery. For example, the Black Death was followed in most areas by mass psychosis, rather than a rational reflection upon the causes of the disaster and how to prevent them. The Golden Renaissance was a deliberate act of genius, a creation, not merely a spontaneous reaction to the disasters. But this Golden Renaissance of Nicolaus of Cusa, of Brunelleschi, of Leonardo da Vinci, *does* give an answer—and it is the only answer we know—for how to prevent the kind of evil which devastated Eurasia during the 13th and 14th centuries, and which is threatening the very survival of civilization today.

What is that answer? Well perhaps no one since the Renaissance itself has stated it in a more powerful and rigorous way than Lyndon LaRouche. But let me recall it to you quickly by a poetic device.

Look at Brunelleschi's cathedral in Florence, which gave a first, awesome demonstration of the power of modern science. Now look at the accompanying picture, taken 500 years after Brunelleschi, during the electrification of Russia. And despite the many evil things that happened under Lenin and Stalin, this is one of the greatest moments in all of Russian history.

Take the countless millions of Russia's peasant population, over centuries brutalized, illiterate peasants treated often worse than animals. Take this poor ignorant population, and *give them light!* Give them education! Give them science! Give them progress! In doing so, a new form of society emerges, a vastly more powerful, qualitatively higher form, in which each of the countless millions of individual citizens becomes potentially the source or active promoter of revolutionary transformations in science and technology. And the Soviet Union collapsed, because it *failed* to continue effectively the process that the electrification policy had started.

Think deeply over that picture, it tells a great secret about what physical economy is all about. Is that electricity, which lit the light bulb in the peasant's home, something purely "objective," a purely "material" thing, as the materialists would like to consider it? Or is an increasing physical, material consumption of households and workplaces a necessary precondition as well as a reflection of the self-perfection of

creative Reason?

The time has come to complete the job, which the Golden Renaissance started.

We are going to rebuild world civilization by rebuilding its economic base, its infrastructure, in a very dirigistic way—which is the only way it can be done. We will lay the foundation, going into the 21st century, to raise the level of household consumption, employment, education, and health standards for the entire world population, up to the maximum levels reached in the advanced industrial nations in their most prosperous period, and beyond. We will rebuild the institutions of scientific progress and dry up the last bases of support of the oligarchy. No longer will there be any hinterlands, no more ignorant, bestialized peoples, who could be deployed against civilization. We will put the oligarchs into the zoo and set the people free.

The policy of the “New Silk Road” will be crucial to that.

The Eurasian development program

Three-quarters of the world’s population lives in Eurasia, about 4.4 billion persons. The population of Eurasia has grown up concentrated along the maritime coasts, great rivers, and trade routes going back hundreds and thousands of years. In fact, most of Eurasia’s large cities—some 60 cities of 1 million or more inhabitants—are located along three main routes linking Central Europe with the population centers of western, central, and eastern Asia. About one-quarter of the entire population of Eurasia, more than one-half of its industrial labor force and about 70% of its urban population—live within 50 kilometers of these main routes, in what we call “development corridors.” These are the band-like regions of land, approximately 100 kilometers wide, which are most directly affected by the transport of goods and persons along the main infrastructure routes.

Think of them as analogous to the great arteries of the human body; from these arteries derive secondary and tertiary corridors which branch out to reach the entire economic “tissue” of Eurasia, its households and its workplaces. And we take the requirements of those households, farms, and industries, what they need in energy, in water supplies, in products and services of every category, per capita and per square kilometer in order to operate at the levels of technology which will be required to maintain 7-10 billion people in the early decades of the 21st century. To deliver those requirements to the economic “tissue” of Eurasia, we need above all a highly efficient infrastructure.

So what we are going to do, is to take the most advanced technologies available today, plus some even more advanced technologies which we shall develop, and use them to build up in these corridors an ultra-modern infrastructure for transport, energy, water, communications, health, and education. We are going to do this in a dirigistic way, using the power of sovereign governments to generate credit and to deploy large sections of the labor force in state-financed projects

leading directly to increases in the real, physical productivity of each national economy.

The centerpiece and backbone of this program is a Eurasian railroad network of approximately 100,000 kilometers length for high-speed freight and passenger transport. This means a thorough reconstruction and modernization of rail lines already existing in much of the corridors, electrifying and double- and quadruple-tracking them, plus construction of new lines, built for speeds into the range 150-160 km per hour for freight and 200-350 km per hour for express passenger traffic. Parallel with this, first-generation magnetic levitation systems will be built up in the highest-density corridors, mainly for passenger traffic. This will be followed, later, by a large network based on second- and third-generation magnetic levitation technologies suited also for high-speed freight transport. These rail and maglev systems will carry the largest part of long-distance transcontinental freight in the early decades of the next century.

The second pillar of the program is a package of great water projects—for flood control, water storage and irrigation systems, regulation of rivers, improvement and construction of harbors, modernization and extension of the systems of inland waterways throughout Eurasia. [Some of these projects are shown in **Map 14**, in the color map section of this issue, and in the article on p. 34.]

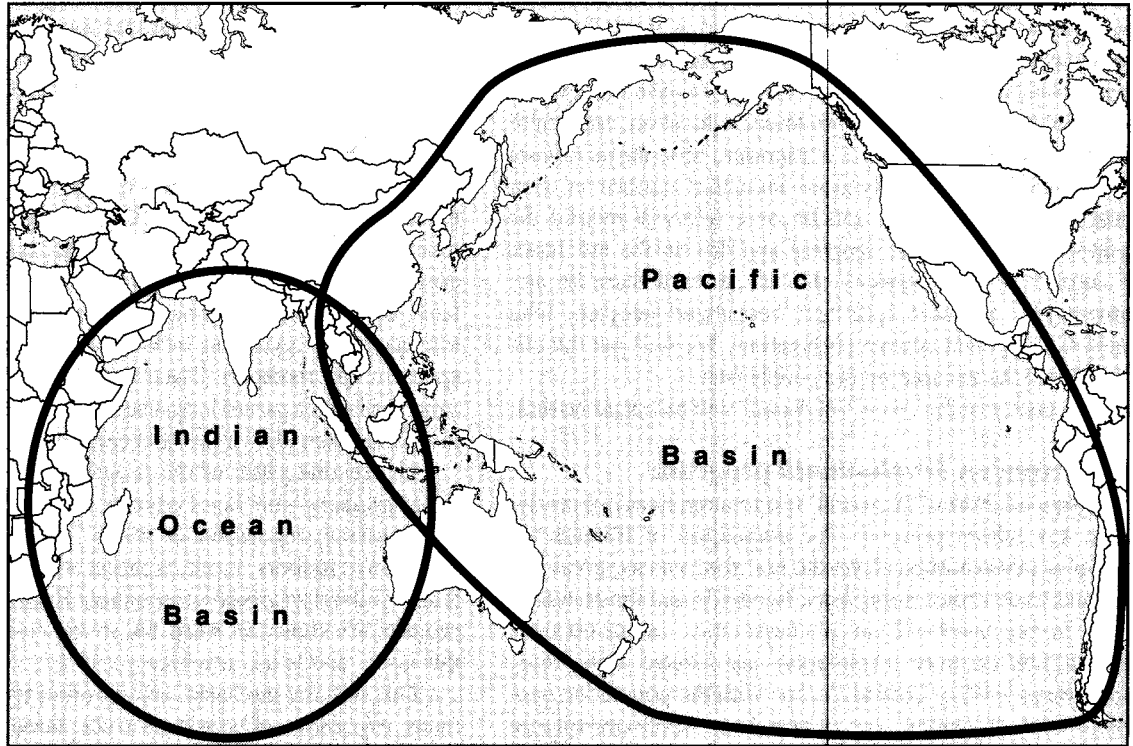
This will lay the basis, among other things, for an enormous expansion of maritime trade throughout the Indian Ocean and Pacific Basin in the coming decades (**Figure 3**). This, of course, has far-reaching implications for the Pacific West Coast of the United States and for the U.S. economy as a whole. There is also an interesting project, to establish a connection via a Bering Straits tunnel from Siberia to Alaska, which would link the Eurasian and North American railroad networks.

The third major pillar is the expansion of energy production and distribution grids, which will be concentrated mostly along the same development corridors. Here the key is electricity. To reach the standards of household and industrial electricity consumption of the advanced industrial nations, China alone will require an addition of more than 1,800 gigawatts of installed electric generation capacity—about 12 times its present amount! India will need more than 1,200 gigawatts. For Eurasia as a whole, we are talking about more than 5,000 gigawatts, which is very roughly *five times* the present generation capacity of the European and Asian nations put together. Actually, the need for electricity will very rapidly increase beyond that, to many times this figure by the middle of the next century.

The fourth pillar of the “New Silk Road” policy is the construction of new cities. Over the next 50 years, several thousand new cities of 300,000-1,000,000 inhabitants will be built in Eurasia, most of them in direct connection with the main infrastructure corridors. We need 1,000 of these in China alone. Many of these will be highly efficient cities of

FIGURE 3

Areas of expanding maritime trade in the 21st century



a new type, called “nuplexes,” which use nuclear reactors to provide electricity and various qualities of heat for an urban industrial center with surrounding areas of intensive agriculture and gardening. These cities will be built from the “bottom up”; essential infrastructure—including energy supplies, water, waste disposal, communications, public transport systems, automated postal and freight delivery systems, and highway access—will be installed *underground*, in a multi-layer structure underneath the surface, with space left over for expansion and technological improvements as the city grows. And we build the city on top of that.

The crucial point is to provide, by the construction of “pearl chains” of cities within the development corridors, the greatest density of energy, transport, water supply, education, and health service at the least relative economic cost per capita. Only in this way can we reach the rates of productivity growth we need to ensure the survival of civilization into the 21st century.

Hamiltonian credit policy

Now how will all this be financed?

In the typical case of a project, in Asia for example, a crucial margin of high-technology capital goods will be imported from the outside on the basis of long-term, low-interest loans. But otherwise, generally speaking, domestic

industries should supply the bulk of the equipment and materials required for the national projects, and nearly all the labor will be supplied from the domestic labor force. To finance this internal side, the credit and banking systems of the various nations must be reformed and reorganized in order to function on the principle of what is called “Hamiltonian productive credit generation.”

For this, each country must establish a national bank which is given the power to issue large amounts of new currency notes, in the form of loans, for productive activities, and to regulate—together with appropriate other state institutions—the financial system as a whole. In other words, we create new money, as required, in order to finance our projects and employ our labor force.

Now, whenever we talk about creating money—otherwise called “fiat credit”—people become nervous and say, “But isn’t that inflationary?” The answer is, that depends on how the new credit is used.

There is nothing easier than creating money. For example, today, all over the world, central banks are creating huge amounts of money; this has nothing to do with increasing the production of real, material wealth, but is just feeding speculation and the growth of nonproductive services. But the direct credit generation of central banks is tiny compared to the trillions of dollars of artificial credit that are being

created de facto within the western financial system, in connection with the derivatives bubble and other forms of purely speculative activity.

What must be done is to bring this wild, speculative credit expansion to an end—it is going to collapse anyway—and to place the power to generate credit and regulate its use back into the hands of the sovereign governments. The essential principle is to couple the generation of new credit directly to the creation of new material wealth. Financing large-scale infrastructure projects and the industrial production related to those projects provides an effective and indispensable way to do this.

The national bank is empowered by appropriate acts of government, to issue a certain maximum amount of new currency notes, which amount corresponds roughly to an estimated margin of additional employment and additional production which can be set into motion by the government's economic policies. In our case, the main instrument to increase employment and production is a package of large infrastructure projects, indicated by the circle in the middle of the diagram. In connection with this, the national bank lends out newly created currency notes in the form of low-interest, mainly long-term loans, through two main channels.

First, the national bank issues credit to the government or appropriate state entities responsible for the projects, to cover outlays for equipment, materials, and labor employed *directly* in the construction projects (for example, railroads, canals, power plants), as well as to private and public subcontractors who may be hired to carry out various parts of the work.

Second, the national bank gives low-interest credits, directly and through participation in loans through the private banking system, to industrial firms producing equipment and materials for infrastructure projects, to help them expand and modernize their operations.

The issuance of new credit in this way creates what we may call a cascade or chain of increased production and employment. To see how this works, imagine the construction of a railroad, which is financed by money from the national budget plus new credit issued for such projects by the national bank. Part of this money, say 40%, is paid out directly in salaries to workers, 50% goes for purchase of rails, concrete, construction machinery, fuel, and so on, and 10% goes for various overhead costs. The 50% in material and equipment outlays go in the form of orders placed by the state entity managing the project, to industrial firms. This money now creates a new cycle of production and employment. Part of the sum goes to salaries of industrial workers, part to purchase of raw materials, semi-finished materials, and equipment, part to overhead, and part to profit of the firm. By means of the tax system and various regulatory measures, we ensure that most of that profit is reinvested in the form of improvements in equipment and technology.

Again, the increased purchases of the firms supplying the

infrastructure projects with equipment and materials create in turn a further cycle of production and employment, and so on. The same is true, in a somewhat different way, for the increased employment of labor. These salaries go mostly to purchases for the material consumption of family households—for food, clothing, household goods, energy, and so forth, produced mainly by the agricultural sector and consumer goods industries. The stimulation of these sectors through increased household consumption generates further production and employment in the industries supplying them, and so on.

So, we can follow the path of the newly created credit all the way through the chain of production and consumption; the money moves in one direction and the goods and labor flow in the opposite direction. Back in 1931, for example, the German economist Wilhelm Lautenbach showed the increased production and employment which are set into motion per unit of credit used for investment in infrastructure projects. Lautenbach was one of those who wanted to stop Hitler and save Germany by using productive credit generation to end the mass unemployment and bring Germany out of the economic crisis.

(I should note, that if Lautenbach's solution had not been rejected at the time, under pressure from the Anglo-American backers of Economics Minister Hjalmar Schacht, then almost certainly Hitler would not have come to power in Germany.)

Now, the crucial point to understand is that the use of credit generation by a national bank, to finance infrastructure development and related productive improvements, causes an expansion of the total physical output of the economy which is *larger* than the amount of new currency placed into circulation. Where does the additional wealth come from?

First, net output increases when we use credit generation to employ otherwise unused or poorly used resources of labor and productive capacity. At present there are enormous such reserves, particularly in the industrial regions of western and eastern Europe, Russia, Ukraine, and other countries of the Community of Independent States (CIS).

Second, we use the large flow of capital channeled via infrastructure projects to *modernize* crucial sectors of industry. We do this by ensuring that new equipment, procured at various stages of the production "cascade," has a higher technological level than the preexisting generation of equipment. In this way we raise the average level of technology in the economy and thereby also the physical productivity of labor.

Third, the dramatic growth in demand for high-technology capital goods, created by large-scale infrastructure investment, greatly accelerates the rate at which the results of new scientific and technological breakthroughs are introduced into the productive process.

The effects just mentioned are all generated by the *process* of building the infrastructure; they begin immediately. Then we have the effect of the infrastructure improvements

themselves, which, as soon as they come on line, increase the productivity of the entire economy, taken as an interconnected whole.

Now, the result of all this is an accelerating increase in the production of real material wealth in the economy. It is this increase, part of which is channeled back to the state in the form of increased tax revenues, which “pays back” the original state investment and the credits that are extended by the national bank to the state.

International cooperation

Now I want to show two other charts which illustrate the international, cooperative side of the “New Silk Road” policy.

I mentioned that a crucial margin of the total investment for infrastructure projects in the less developed parts of Eurasia, will come from outside, in the form of high-technology capital goods and know-how. Most of this will come from the “Productive Triangle” of Europe and from Japan, with the United States hopefully playing an increasing role in the medium and long term. The financing for this technology transfer will be arranged in a number of ways, including multilateral development banks of the sort proposed nearly 20 years ago by Lyndon LaRouche, more recently by the late Alfred Herrhausen in the case of Poland, and just recently again by Shimon Peres and others for the Middle East. Some aspects of the Delors infrastructure plan for Europe lean in a similar direction.

The key point I want to emphasize is, that the European Productive Triangle is capable of generating a large and increasing *surplus* of high-technology capital goods which could be transferred to other areas of Eurasia on the basis of very long-term credits (20 years or more), without causing economic hardship in Europe. In fact, with the appropriate policies, the process of virtually “donating” large amounts of technology will actually make Europe *richer!* The main reason is, that the “spin-off” benefits derived from accelerating the flow of new, more productive technology into Europe’s industry—the benefits I outlined in points 2 and 3 above—are much the same, whether the project is located in Europe itself, or somewhere in the middle of Asia! In fact, those effects are larger in the region of the Productive Triangle than anywhere else at this time, because the labor force of the Productive Triangle has the education and the cultural potential to develop and assimilate new technologies at the relatively highest rates. All that is required is to give up the insane “green,” “post-industrial” economic policies which are destroying Europe, and to upgrade the infrastructure in the Triangle and the spiral arms, in such a way that the Triangle can operate efficiently as a technological “locomotive” for Eurasia as a whole.

The development of Eurasia will actually occur through a *three-way* pattern of trade and investment flows. Let me illustrate this with an example. China needs to build up ap-

proximately 100,000 kilometers of new railway lines, roughly 1 million kilometers of new paved roads, plus thousands of kilometers of new and improved inland canals, to achieve an adequate internal transportation system. An enormous amount of heavy equipment is required for construction projects, and plants producing cement, steel rails and other components, etc. must be improved and expanded. Much of the required heavy equipment and industrial plant could be supplied by industries in Russia and Ukraine, for example, especially if those industries were retooled and modernized using the most advanced machine tools. Those machine tools and other advanced technologies for the modernization of Russian and Ukrainian heavy industry could be supplied, for example, by Germany.

By developing such three-way cooperation, we obtain an amplifier effect, where a relatively small quantity of very advanced technology produces the greatest effect in terms of the necessary infrastructure construction. The financing of “triangular” trade flows of this type might be organized, for example, by a suitable international clearing house or development bank, in cooperation with the national banks of the participating countries; perhaps a Eurasian Infrastructure Bank will be set up for this purpose. The essential idea for the necessary institutional framework was outlined by Lyndon LaRouche in his “International Development Bank” proposal back in 1975-76. That new framework will take the place of the ruinous and bankrupt International Monetary Fund-World Bank-General Agreement on Tariffs and Trade (GATT) system.

Common interest versus the ‘Great Game’

There is no doubt that the “New Silk Road” program I have outlined, the Eurasian infrastructure program, is feasible. It can work.

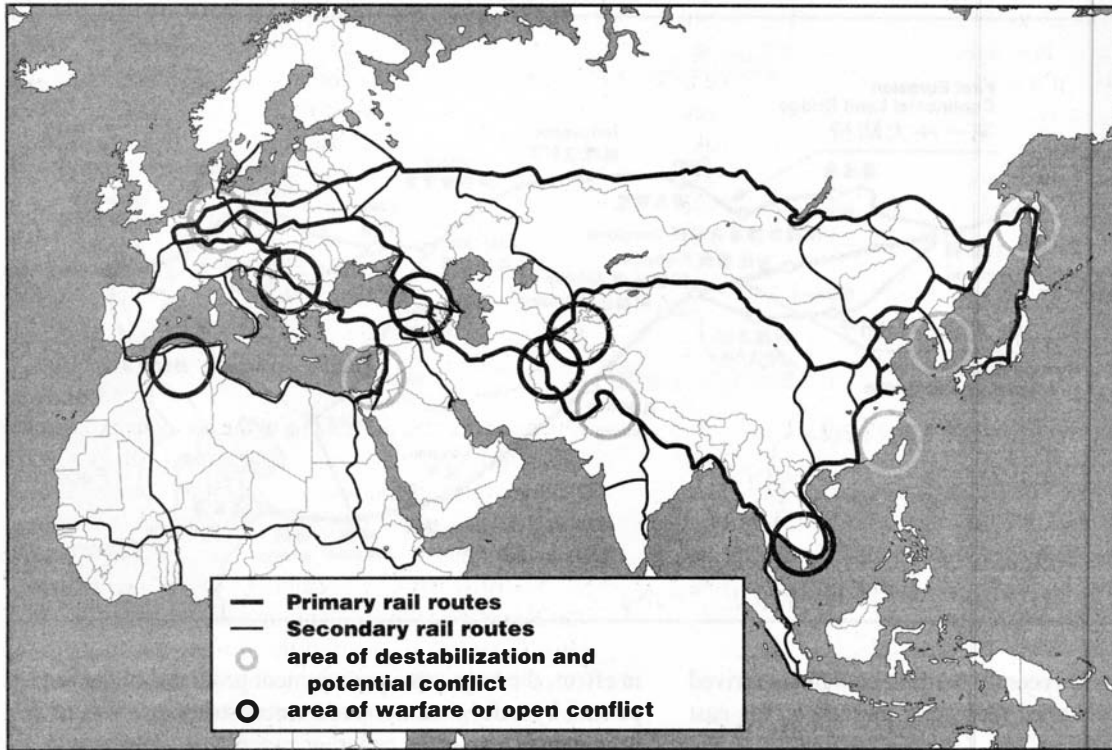
Our enemies, of course, also know that the plan can work, and they are acting accordingly. Just look at the map of our proposed Eurasian infrastructure network, and circle the major crisis spots, regional conflicts, and wars in which British intelligence is playing its dirty geopolitical games (Figure 4)!

We have come to a point, where the immediate survival of every nation in Europe and Asia depends on realizing the “New Silk Road” policy. So, if we want to survive, then the whole infernal machinery of Venetian-British geopolitical manipulation must be smashed—including that useless piece of garbage called the United Nations. In its place must come a real community of nations, a “Harmony of Interest” among sovereign states, based on the universal principles of human development.

Let me give a couple of examples. Look at the Near East—the crossroads between Europe, Asia, and Africa. Here one of the great railroad trunk lines will pass through, linking together 700 million people in Europe, more than 700 million in Africa, and 3 billion in Asia.

FIGURE 4

British destabilizations hit key points on Eurasian rail grid



The peace process in the Near East, in which this organization has already played a key, catalytic role, has put the issue of “Harmony of Interest” into the middle of the international discussion. Either there will be great projects of infrastructure here, or there will be war. And freshwater is the key. We are going to *create* freshwater—artificial rivers! And with this we will create rich agricultural areas, where today there is only desert. It’s very simple: We need about 7 kilowatt-hours of electric power to produce one cubic meter of freshwater by the desalination of seawater. Plus we may need a few kilowatt-hours to pump the water where we need it. We are going to need about 5 gigawatts to *double* the amount of freshwater available in the region, as a first step. That’s not much, that’s easy! We take a couple dozen high-temperature nuclear reactor (HTR) modules, of the type that are easily mass-produced and transported, and we install them in groups at a series of sites along two seawater channels which will be built starting immediately, in crash programs: the Mediterranean-Dead Sea Canal and the Red Sea-Dead Sea Canal. At these HTR sites we build up agro-industrial centers, where nuclear power will be used to desalinate water for intensive gardening in the desert, as well as for industry and a residential area, which will grow to a major city. When we need more power, we just plug in more modules.

By doing this, we create a true cultural revolution. The

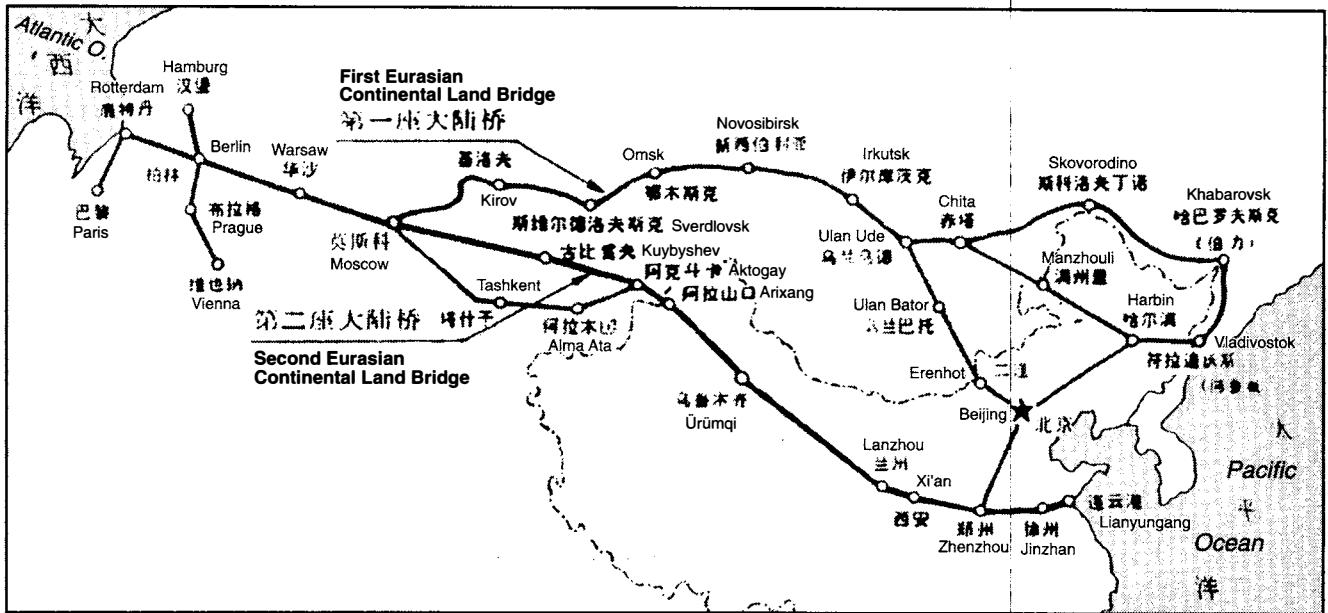
creation of freshwater, by science, has the same meaning for the poor Arab of the Middle East, as the electric light had for the Russian peasant!

Let’s turn for a moment to China. Here we have a complex situation, a country with enormous problems, but also great potential. China is today nearly the only remaining country in the world, where there are great projects of infrastructure, where nuclear energy is being developed, where the construction of new cities, as we recently heard, is being planned. These projects are by far not sufficient, but they are significant, and reflect a resistance on the part of some people in China to committing the kind of national suicide which has occurred in other countries with the help of George Soros and Jeffrey Sachs.

Let me give one example. A couple of years ago, with the completion of a crucial remaining rail gap between Xinjiang and Kazakhstan, the so-called Second Eurasian Land Bridge was formally opened. **Figure 5** shows a Chinese view of the two Eurasian land bridges running from the Pacific to the Atlantic oceans. According to this map, the Second Bridge runs through the great capital city of former times, Xi’an, and from there via Lanzhou and Urumqi cities into Kazakhstan, and then northward to Russia, joining the Trans-Siberian line east of the Urals and going from there via Moscow, Warsaw, and Berlin all the way to the Atlantic port of

FIGURE 5

The two Eurasian land bridges: a Chinese view



Rotterdam. In fact, just recently the first containers arrived in Rotterdam, which started their long journey on the east coast of China.

This Second Eurasian Land Bridge is very consciously seen in China as part of a new “Silk Road” policy, as a way to open up China’s interior to the influence of Europe, a way to develop a closer relation between China and Kazakhstan and the Central Asian Republics, and by implication also with the Arab countries of the Middle East, which is important for the Islamic population of western China. On the other hand, the Second Eurasian Land Bridge opens a new dimension in the potential relationship of China and Russia. It poses, at the same time, the profound challenge, unanswered so far, whether China will have the courage to go ahead with a real, in-depth industrialization and urbanization of its rural “hinterland.” That is the issue we have addressed in our draft program on “The Renaissance of China.”

Let me turn, for my last example, to the former CIS countries, and particularly the most highly industrialized areas, in Russia and Ukraine, for example.

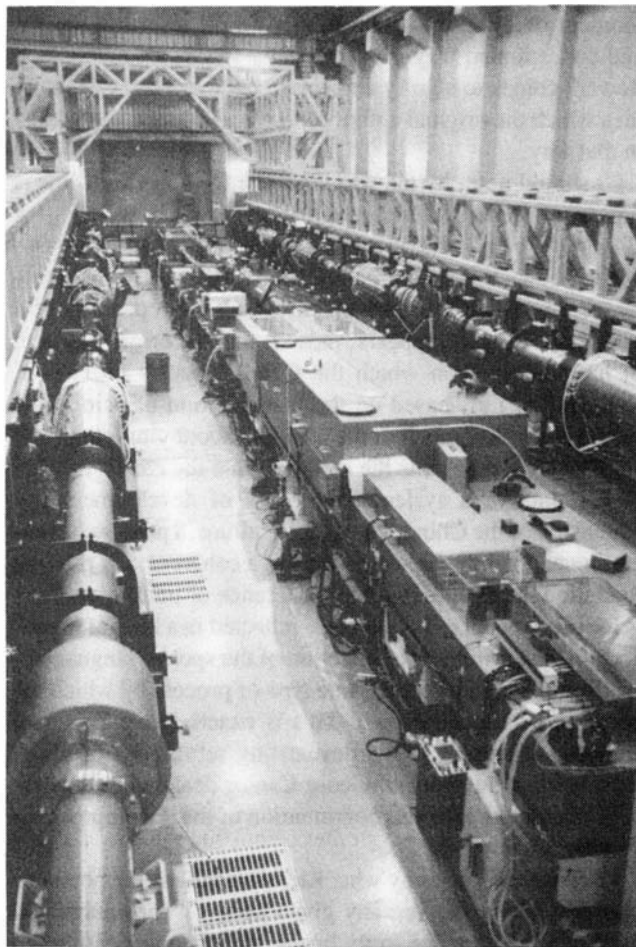
It is well known that a very large portion of industrial activity in the former Soviet Union was connected with the massive armaments production. This is especially true for the most modern and effective part of the industry. Given that arms production is greatly reduced, how will these industries be supported?

If we want to maintain that productive potential of that sector—which is the greatest single asset that Russia and Ukraine have—there is only one feasible option: We replace,

in effect, the huge arms procurement programs of the Soviet period, by a dirigistic economic reconstruction effort of *approximately the same order of magnitude*. The task is to completely rebuild the *infrastructural base* of the CIS economies, using the most advanced technologies that are available or can be developed for that purpose. This is exactly the area where the research and development capability and advanced machine-building capacities of the military-industrial sector can be exploited to the relatively greatest extent.

This is not just a matter of internal importance to Russia, Ukraine, and so forth. We need those scientific, technological, and industrial potentials to help solve the problems of the world *outside* the former Soviet Union. Let me just give you a few examples of a “shopping list” of crucial tasks:

- 1) Development of inherently safe, modular nuclear reactors, and of facilities for producing them in large numbers. Development of fusion energy in various forms as the key energy source for the 21st century. Development of fusion propulsion for interplanetary space travel.
- 2) Development and construction of nuclear-powered ships of various kinds to meet the requirements of greatly expanded world trade, particularly in the Pacific and Indian ocean regions. In this context also, development of advanced propulsion systems for high-speed ships.
- 3) Creation of second-generation magnetic levitation systems suitable for automated freight transport at high densities. In Ukraine, for example, a new form of self-stabilizing magnetic levitation system has been developed which could have revolutionary applications in transport and



The Gekko glass laser fusion device in Osaka, Japan. Directed energy technology must be brought to bear upon industrial processes in the 21st century.

many other fields.

4) Development of hypersonic aircraft for transport of passengers between America, Africa, Europe, and Asia at speeds of Mach 4-6. Development of other novel types of aircraft.

5) Application of “directed energy technology”—lasers, particle beams, intense microwaves, etc.—to processes of industrial processing and manufacturing.

6) Development of revolutionary methods of optical biophysics for the diagnosis and treatment of disease. Here, also, the former Soviet Union was a leader, as the work of the Gurvich school demonstrates. We need those potentials for life-and-death combat with AIDS and the rising danger of a “biological holocaust” of pandemic diseases.

The issue of science

I want to conclude by addressing a deeper issue underlying the “Harmony of Interest” of the nations of Eurasia, which will be linked together by our “New Silk Road.”

About 550 years ago, in the early phases of Europe’s

Golden Renaissance, a discovery was made, which launched what we call modern science. From that point on, the *process* by which mankind progressively increases its mastery over the forces of nature, beyond any specifiable limit in terms of human population potential—that generative process itself, became an intelligible conception, a *communicable idea*.

Now, after 550 years, the *whole world* knows that the continuous waves of scientific and technological progress, launched by that Renaissance, have been the cause of the most rapid and sustained *improvement* in man’s average conditions of life, ever known in human history. Only a few brainwashed greenies, who have never experienced the world outside of a television set, fail to grasp that. But go to the developing countries, go to Africa, to Asia, to South America, and you will see how the people crave technology, how they want to build up factories and railroads and power plants, how they want their children to be scientists and engineers, and so on.

The problem lies in the fact, that the vast majority of people in this world, people who rightly *desire* scientific progress, don’t know what science really is. They only know that science is a somehow a source of prosperity, of wealth and power. They are like a person who eats an egg every morning, but has never seen a chicken.

That defines what I think is the crucial issue in the history of Eurasia, the key paradox of Peter the Great and the so-called westernization of Russia, the paradox of China today, the paradox of Japan, the paradox of the Arab world. It is also the paradox of our degenerated western society, the paradox of the majority of our scientists today, who, because of their Aristotelian schooling, *also* don’t know what science is.

That defines a great responsibility for those few of us who *do* know, or have *begun to grasp*, the secret of science, the secret of the Renaissance. For without that, our human civilization is doomed.

But perhaps our task is not so heavy, not so herculean, as it might appear at first glance. Let me end with a relevant little discovery.

If we dig into the literature of great civilizations, we invariably find a wealth of proverbs, parables, and fables—“words of wisdom,” as we might say—which often go back to the most ancient times and which were passed down from generation to generation, from parents to children, as a kind of moral teaching. In the West we all remember Aesop’s fables, which were assembled in essentially the form known today around 550 B.C. The Holy Bible of the Jews and the Christians is full of parables and metaphorical images. It is relevant to note that during the European Renaissance, Erasmus of Rotterdam and others devoted much effort to gathering and reworking thousands of ancient fables and parables, as well as inventing new ones. Later, at the beginning of the Weimar Classic period of Germany, the poet Gotthold Lessing led a revival of this. But we find the same sort of thing in the Arabic traditions, in the Sanskrit culture of India,

the culture of China, and so on.

It is easy to guess that the phenomenon we are dealing with here might be very close to the origin of human language and human culture itself.

Now, in this context, the case of China is particularly interesting. The Chinese language is richly populated by what the Chinese call *cheng-yu*, short idiomatic phrases which nearly all consist of exactly four characters in the written language. There are many thousands of them, many are very old, and in most cases their exact origin is not known. There are considerable number of *cheng-yu*, however, which are associated with fables that were preserved in writing.

Let me give you a typical example of this. There is a *cheng-yu* which means, if we translate it literally: "Ride horse, smell flower."

What does that signify? Here is the corresponding fable:

There was once a young man, who had a badly deformed or injured foot, so that he could not walk normally. But the young man dreamed of finding a beautiful girl to be his wife. He went to a friend of his to help him find such a girl. Now, the friend actually knew a girl who was very nice but had a deformed, ugly nose, and this girl wanted very much to have a handsome husband. So, the friend decided to bring these two together. He instructed the young man to get onto a horse and to ride past the entrance where the girl lived. And the friend arranged for the girl to stand by the entrance and hold some flowers in front of her nose, as if she were enjoying their nice smell.

Well, at this first encounter, the two young people immediately fell in love. To the girl, the young man looked so strong and manly on his horse; and the young man could not resist the romantic sight of the girl smelling the flowers.

The marriage was arranged immediately, and at the time of the marriage, the two young people saw each other for the first time directly, as they actually were, and then they both knew what had happened.

That is the fable which is condensed, in a sense, into the formula, "Ride horse, smell flower"!

Here we have, in practically the simplest conceivable form, not only a metaphor, but the particular type of metaphor which is a microcosm of what we call the *Socratic method*. The irony in the story causes us to reflect on the inferior, common level of thinking which confuses appearance with reality; and by that very act of reflection demonstrates to us that we have the ability to think on a *higher level*, and to free ourselves from that slavish, Aristotelian mentality. And that is the reason that we experience a kind of pleasure from the story.

Think for a moment back through the process, the change in your own mind, as you heard the fable. That change is an *idea*, which cannot be expressed directly by words, but only evoked metaphorically. What the expression "Ride horse, smell flower" does, is to attach a name to that change, to that

moment of upward motion of our mind, in a very lawful and concentrated way. So, the *cheng-yu* "Ride horse, smell flower" comes to signify and evoke once again the Socratic idea which the original author of the fable created and named in that way.

I should note, by the way, that the four-character line is typical of ancient Chinese poetry, particularly the *Shi-jing* (*Book of Poetry*), the great collection of poems which was written down by approximately 1000 B.C. The four-character *cheng-yu* themselves typically display the prosody of a good poetic line. It appears, indeed, that the original system of harmonics, upon which the Chinese poetry developed, was dyadic, i.e., based on the juxtaposition of pairs. This would demystify much of the business about ying-yang.

The crucial point is the evidence that the *cheng-yu* were the product of a systematic process of development and expansion of the Chinese language-culture, a process of generating and naming new concepts in a coherent way through Socratic forms of irony. That coherence or unity of method is itself a concept of higher *type*, reflected in a kind of invariance in the harmonic organization of the spoken language.

But this is exactly the same *type* of process by which the progress of science occurs! This is exactly what Bernhard Riemann discusses in his devastating refutations of Kant, exactly what the work of Georg Cantor deals with. Science is in a sense the rigorous continuation of the development of language.

Science advances by what Riemann called "the poetry of hypothesis": by driving any given body of knowledge and technological practice to its limits, and then subjecting the underlying paradoxes and fallacies of any fixed mode of knowledge, brought to the surface in that way, to the same kind of Socratic irony as we saw exemplified, in a kind of "cell form," by the Chinese. So: "Ride horse, smell flower!"—science is enriched by a new conception, a new quality of hypothesis! But, that process of systematically driving existing knowledge to its limits, *is* the continual expansion of human productive powers, of human activity in the universe. It requires the continual increase in the quantity and quality of per capita consumption of the population, continual improvements in education, and so forth, in order that new, valid hypotheses, discovered by individuals, might be assimilated and applied by society as a whole in the form of technological progress. That requires infrastructure, and so on and so forth.

So now we have come to the end of our long journey along the "New Silk Road." Actually, the little fable I told you has a happy ending. The young couple were able to laugh at themselves, and they lived very happily together. And so, we may hope, the nations of Eurasia and the rest of the world will be able to live together, by nurturing and exercising that potential for creative activity, which—as the universality of those proverbs and fables demonstrates—belongs to every human being on this planet.