

'Russia's Crucial Role In Solving The Global Crisis

The following address was delivered to an International Symposium, "Space And Time In The Evolution Of The Global System 'Nature—Society—Man,' " dedicated to the memory of Pobisk Kuznetsov, at the Russian Academy of Continuing Education for Teachers, in Moscow, on Dec. 14. Subheads have been added.

Because the time is short, I shall focus on what I consider would be most useful for me to say on this occasion, noting the fact that there have been published in other locations in Russia, or presented documents, which I have issued on such subjects as the significance of Vernadsky. So, I focus on the implications and certain aspects of the concerns of Pobisk Kuznetsov, from the vantage point of comparing him to Vernadsky.

We now are in a situation, in which the world may go into barbarism very soon. I've indicated the reasons for this, in other locations, and I've also indicated what I propose to be the remedies for the threat, of this immediate financial catastrophe. I've indicated, that if the world is to come out of this great financial, and monetary, and economic crisis successfully, Russia, as a Eurasian nation, *must play a very crucial, central role.*

Looking from the Atlantic Ocean to the Pacific Ocean, across Eurasia, we see countries, such as China, India, and Southeast Asia, and other countries, which are in great deficit in respect to the amount of technology they have, and can supply, to meet the urgent needs of their populations, as a whole. So the nations, such as China, Southeast Asia, and India, must now catch up with the technology they have not had and have not assimilated, or have not developed, over the recent century. To a certain degree, India has a significant scientific community. That capacity far exceeds India's needs. China has significant technology. But Chinese technology is far less than the urgent needs of China, as a nation, as a whole. The sources of this technology available within Eurasia, include Japan, Russia, and, mostly, Western Europe. As we can observe today — those of us assembled — that scientific potential in Russia, has been sleeping for a while, without work.

While related problems exist in other parts of the world, we can concentrate upon the Eurasian continent and the islands associated with it, as the typical center of the world's problem today.

The Greatest Transformation Of The Biosphere In History

This brings us to Vernadsky. One of the greatest concentrations of mineral and related resources in the world today, is an area, which includes Central and North Asia, including the tundra areas of Russia. Of course, it is possible to loot some of these resources, and ship them abroad at cheap prices. That would be a tragedy for Russia, and a betrayal of the interests of Eurasia, as a whole. So, I have proposed, that we must develop development corridors, superseding the Trans-Siberian Railroad, across Eurasia. Through large-scale water management, improved transportation, power generation, and other infrastructure, including human support infrastructure, in these regions, we can transform these areas of Asia.

To the west of Russia, in Europe, we have bankrupt nations: Germany, France, Italy, other nations. They are bankrupt, presently — nations which are traditionally producers of modern technology. So, there's a natural market for these parts of Europe — as for Japan — in Asia, if the proper system of economic development is organized. And Russia and Kazakhstan represent the principal conveyor belt of development, and other things, necessary to tie the potentials of Europe with those of various parts of Asia. This would require, and would mean, the greatest transformation in the biosphere, in the history of humanity.

Now, obviously, we can not do the kinds of things we've often done, in looting the biosphere. Often, at present, through looting policies, we degrade the biosphere more rapidly than we extract useful results from it; for example: mineral resources.

So therefore, when we are going to transform the biosphere, by means of a policy action, we must consider the implications of what we're doing, and approach the problem in a way which becomes, then, a net improvement in the biosphere, as the basis for man's activity. This forces us to think in terms of all modern economy from the standpoint of Vernadsky. And, here, as I view Pobisk's work, lies some of the central significance of this endeavor.

This also involves, how we look at man's relationship to the Solar System and beyond. This means that space exploration and space science become an integral part of developing life on Earth. As some Russian scientists know, the radiation not only from the Crab Nebula, which produces most of the cosmic ray radiation we experience, but other radiation, affects life on Earth and the conditions on Earth in various ways. For example, the question is posed, immediately, from the standpoint of Vernadsky: What is the differential relationship between the same radiation impinging upon a non-living process, and the same radiation impinging on a living process?

Vernadsky And The Principle Of Life

Then, look at this more generally. With that as preliminary, let me get to the core of my point. And put my relationship to Pobisk's work, not only for the past, but for the future,



Pobisk Kuznetsov organized a presentation for Lyndon LaRouche at the Russian Academy of Sciences in April 1994, during LaRouche's first visit to Moscow. The photo on the right is a scene from that event, with Kuznetsov in the center and LaRouche on the right. The photo on the left shows Kuznetsov on June 8, 1995, listening to a speech by LaRouche at the Moscow Methodological University. To his right is Prof. Yuri Gromyko, who chaired the organizing committee for the Dec. 14, 2001 conference in memory of Kuznetsov.

in that context, within the context of the work of Vernadsky. Now, Vernadsky, using the same methods of crucial, universal scientific proof, which had been used by Mendeleev earlier, made a *conclusive* scientific demonstration of the distinction of the principle of life, on the basis of biogeochemistry, continuing the work of such predecessors as Pasteur and Curie.

He also went further, and this comes to the question of what man should do about the biosphere. And I'll state the thing in my own terms, rather than exactly the way Vernadsky put it. What Vernadsky demonstrated (though I think not as conclusively as he would have wished to, had he lived longer), from the standpoint of physical science, is that man is made in the image of the Creator of the universe, and has special powers which no other creature has. This corresponds to a concept, first developed in known European civilization by Plato, in his dialogues. This is also a concept, which was developed in what are called "spiritual exercises" in certain aspects of Christian theology. So, this power is known, and we have ways of demonstrating it, as Plato demonstrated it with the dialogues, and as theologians sometimes demonstrate it, as well.

So, from Vernadsky's standpoint, with this background, the universe as we know it, is divided into three special kinds of interacting "phase-spaces." These are defined from the standpoint of experimental physics, as follows. We know certain principles, which can be proven experimentally, to be universal, from the standpoint of the assumption that the universe were abiotic—not a living universe. There are also experiments, as typified by the work of Pasteur, and Curie, and Vernadsky, that demonstrate that the abiotic universe is efficiently transformed by a principle which exists entirely *outside* the abiotic universe. This is the principle from which life-forms are generated, in the universe. This principle—"life,"

if you wish to call it that—is apparently very weak, relative to abiotic forces, but its persistence on Earth demonstrates, that life has increasingly transformed this Earth, so that more and more of the Earth is either living processes, or the products of the action of living processes.

Then we come to a third category: The power of individual human cognition, as expressed by the discovery of scientific principles, is also a force which acts upon *all* aspects of the universe, both the abiotic and the living, in the same way that the living processes act upon the non-living universe.

How Man Changes His Nature

Now, what Vernadsky considered, but did not undertake, in his late work, on this subject, was a question which I found Pobisk wrestling with, at the time I first met him: How can we represent a universe, which is composed of three concurrent, but distinct, phase-spaces? It was suggested to Vernadsky, but he didn't take it up—partly because of his age and condition, at that time. There is a unique mathematical-physical conceptual approach to this problem. It's called "Riemannian geometry." In particular, this geometry has a very specific name, of great significance, which is peculiar only to Riemannian geometry. That name is, "differential geometry."

This is not exotic. It's very tangible, very demonstrable, but like all scientific facts, it has to be demonstrated, to be made clear. This is where Pobisk became fascinated with my definition of "potential relative population-density," as a function.

So, the significance is this: What is the difference between man and an animal? An animal can not change his nature. Man does, we hope. How does man change his nature, in a positive way, of course? By making the equivalent of an hypothesis, which turns out to be *an experimentally provable*,

universal physical principle. By our adopting these principles, as we discover them, and by our cooperating in *using* these principles, we increase man's power in the universe, per capita, *in the only way possible*.

That is the secret. Therefore, if you wanted to have the best economy, if you want the kind of economy that can master the problems of the biosphere of Central and North Asia, you must change the policies of education, and qualification and employment of the labor force. You must make the educational process, including the university, the driver of the economy. You must get away from the textbook approach to education. You must burn all multiple-choice examinations. You must teach science the way it was developed: The pupil must experience the mental act of discovery, of the great discovery, from thousands, or hundreds, or tens of years ago. You must base the educational process on a heavy emphasis on *pedagogical experiments*. In other words, the child must—or the child, or the adult—the student *must* experience the paradox, which shows that the present assumptions of knowledge are false. The student must somehow develop the experience of generating the hypothesis, which solves that paradox. The student must experience the pedagogical experiment, which is sufficient to test the hypothesis. And the process of pedagogical experiments must be extended, as a habit, into fundamental-research experiments, which should be the driving concern of the university.

This must be a process, not merely of a few scientists; it must be the process of the entire population. You can not have a scientist directing, effectively, a scientific principle's implementation, to a bunch of working people who can't understand it. From my limited knowledge of Pobjack, if he were sitting here now, he would be laughing with pleasure, at what I am saying.

Look At The Condition Of The Mind

Now, finally one point. The idea that science is limited to what we call "physical science," is a great error. What we should look at, is not the idea of physical science as such, but we should look at the condition of the mind, which generates, successfully, the great discoveries of universal principle upon which we depend. I'll give just two examples on this point, in order to limit time. Take, first of all, the case of Johann Sebastian Bach: Now, Johann Sebastian Bach's work was rooted in some work by Leonardo da Vinci, earlier, at the end of the 15th Century. Leonardo, in a partly lost work, called "De Musica," defined the principles of singing-voice tuning. Leonardo explored the singing practice which had been cultivated in Europe at that time—that the human singing voice has six basic species, defined by registration. He examined this question of the singing-voice organization—which was well known at that time—but, he examined it scientifically, and left fragments of his "De Musica" to later generations.

In his life's work, Johann Sebastian Bach, who was from a long succession of Bachs in Saxony, in Germany, dealt with

the ironies of two things: the ironies of the way you compose a succession of two notes, and then try to sing a counterposition to those two or three notes, and make a composition out of that. From this, based largely on the impact of Bach's work, at a later time, on Mozart—in about 1782—there was codified what became known as "the Classical method of composition derived from Bach," which is characteristic of all Classical composition, in Europe, in all media, from the time of Mozart through Brahms. The key thing here, is: We're looking at—in music, or, particularly in well-tempered counterpoint—a relationship among persons, a *social* relationship, organized around the equivalent of scientific principles, which are discovered as physical principles.

A Happy Revolutionary

And then, you have a second subject, which will illustrate the same point. You have the work of the great composers of drama, which include the ancient Greek drama: ancient Greek tragedians; the work of Plato—his dialogues—which are actually a form of drama; the great successors of Plato, which are Shakespeare and Schiller, in modern times; and we have Pushkin, of course, in Russia, as echo of that.

The characteristic of great Classical drama, is: It's never fiction. It's always based on either a legend, which a society has, or on actual history. The subject of great drama, is to show how a culture, or a society, tends to destroy itself. The audiences of a good performance of great drama, walk out of the theater, as Schiller said, "better people than they walked in," because they have seen society on stage, society they recognize, destroying itself. And, they are *happy*, because now they know that this mistake *could have been avoided, with consciousness of the people of what that error is*.

And the greatest of Classical drama, does not really show tragedy. It shows people rising above tragedy, how one or more individuals, in a doomed society, discover the principle of action, which leads that society *to save itself*. Take the case—the famous one I often refer to—of contemporary times: 1962, Charles de Gaulle, the President of France. He was faced with a coup d'état by a terrible, fascist mob. And he used the television media, to address the French population, simply to exert leadership, and to say to the French, "Help me." It was possible for him to prevent tragedy, by exerting the proper form of individual leadership at the moment of great crisis.

So, in addition to this role of the scientist, who is also one of these sublime people, who lead nations out of potential failure, we must see physical science as simply one branch of a larger science, properly called "statecraft," in which the greatest Classical art is used to help a population *educate itself in the kinds of institutions and cooperation that society must employ to solve its problems*. That's why I'm a happy revolutionary. That's why I was able to recognize Pobjack as an essentially happy revolutionary: He had the essential quality of a great scientist—laughter.

Dialogue With LaRouche

Q: Mr. LaRouche, does not the presence of U.S. troops along the Asian underbelly of Russia, in Uzbekistan, link Europe with Asia?

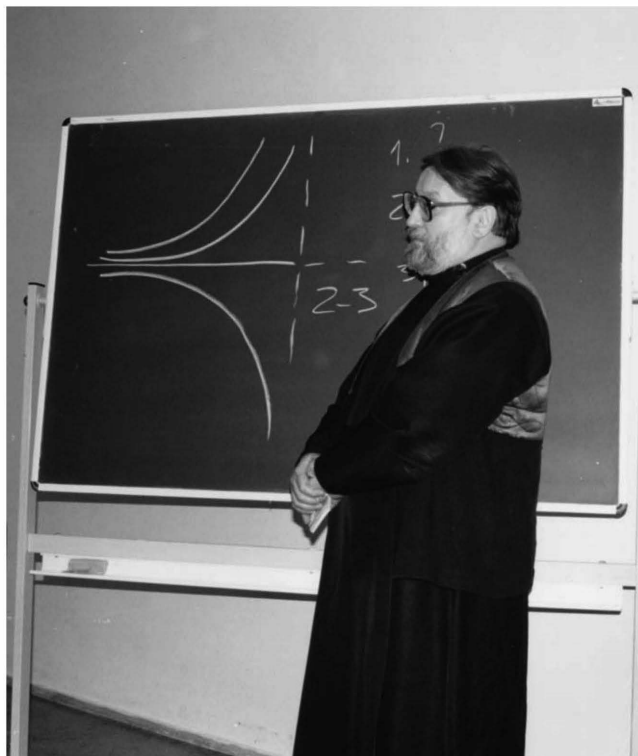
LaRouche: In a negative sense, that's the case, but the situation is much more complicated than that. Obviously, people today, in Russia, are justly concerned, because the implications of what's happening there, are not fully understood. Personally, I think the whole operation is a great mistake. It solves no problems. The Taliban will disappear into the mountains, and come back in the Spring. We see the assassination attempts in the Indian Parliament, yesterday, which are part of the increased instability, spread into the Subcontinent by the bombing of Afghanistan. We must deal with the fact that we have governments which are sometimes *less* than imperfect, and we must figure out what we are going to do, to try to prevent a catastrophe from occurring.

I think that one should put aside all simplistic attempts to understand the situation, and look at this from a higher strategic standpoint. This could lead to a catastrophe for all humanity. I don't minimize that. But, I'm concerned to find the *action*, which will prevent that catastrophe from occurring.

Q: I'm an expert in management from the International Academy for the Integration of Science and Business. This Academy is now developing very broad plan for the transformation of our industry, with its hundreds of companies, to be lifted to a new technological-industrial level. I know a lot of economics, including American economics, but concerning physical economy I heard what the gentlemen had to say at the Duma, and I didn't understand anything. Allow me to ask you this question, speaking for myself: Would you be able to come to the Moscow Confederation of Industrialists and Entrepreneurs, and explain this "physical economy" to them? I had a first American comrade, who helped to save me in combat, at Leningrad under the blockade [during World War II]; and, perhaps you will turn out to be the second!

LaRouche: Well, the point is, I'd be very happy to be in Moscow at almost any time, and for such a purpose, in particular, if it's possible.

Q: In connection with the speech of our colleague, I would like to pose this question: In connection with the extreme conditions in Afghanistan, and in general, in the operation that's now being called "Freedom Without Borders," I would like to turn to Vernadsky's vision of World War II as a resumption of the First World War. Precisely, in his very last work, called *On The Noösphere*, Vernadsky argued that the outbreak of World War II should be dated from 1931. And, therefore, I would point out that we should, according to Vernadsky's reckoning, be marking the 70th anniversary of the outbreak of World War II this year. Just now Russia



A participant in the symposium honoring Kuznetsov draws LaRouche's pedagogical "Triple Curve" diagram, a Typical Collapse Function, in the course of asking LaRouche a question.

and America have been jointly commemorating our common tragedies — marking the 60th anniversary of the Great Patriotic War and the 60th anniversary of the attack on Pearl Harbor, it is worth noting that we have this anniversary year in common—but we forgot that we *missed* a whole ten years after the actual beginning of World War II. Are we not repeating the same historical mistake, by ending the Cold War too early? And is not this "Freedom Without Borders" a resumption of the Cold War, but now — instead of the earlier, inter-bloc phase — in a new phase, which is the phase of a clash between civilizations? This is a far from theoretical question for myself and those of my colleagues, who pay close attention to the heritage of Vernadsky, and to be guided by it in looking not only at the events of the recent past, but to what's happening before our eyes.

LaRouche: Let me just say one thing, first of all, ironically, and then give you a general answer on this question. One of the first impressions, on me, of Vernadsky's work — the strongest impressions — came from a RAND Corporation report, in the late 1940s, when RAND was formed. That began. Now, you go back to a recent period: 1998. In 1998, when Prime Minister Primakov made a visit to New Delhi, he proposed a policy, which I had been pushing for some time, called the "Strategic Triangle," among Russia, China, and India. In December of 1998, the RAND Corp. and the

Cato Institute, and others, began screaming that Primakov must be destroyed. And, the reason for some of the recent developments, which have affected President Putin, are of the same nature.

And, now, let me refer to a second case, of a gentleman, whom I've described, very kindly and generously, as a "dangerous lunatic": Zbigniew Brzezinski. The point is, what we're facing now, as Brzezinski has defined, with his clash of civilizations policy, is what should be described as the "Third Geopolitical War" organized by the British monarchy and its friends, which cover World War I, World War II, and the threat of war now — and all threats of war in between. The First World War began in 1894, with the Japanese attack on China, the occupation of Korea, and then the war against Russia. The second one occurred as a coup d'état in January of 1933, when Montagu Norman, the former head of the Bank of England, and his New York partners, financed a coup d'état which brought Hitler into power in Germany. And, then, a British agent, Hjalmar Schacht, in March of 1933, became head of the Reichsbank in Germany. And, then the Reichsbank used credit, obtained from London and New York bankers, to finance German armaments, in preparation for an invasion of the Soviet Union.

Today, what you've seen recently, is an example of the same geopolitical issue. Call it the "Primakov War": Because, whenever Eurasia, as in the late part of the 19th Century, begins to bring together parts of Asia, with Russia, and parts of Western Europe, in economic development cooperation, *the Anglo-American financier powers see their power threatened, and they're prepared to kill.*

I try to stop them, but that's why I get into a lot of trouble with some people.

Q: I would like to ask three questions, for which I shall need to use the blackboard. We thank you for coming to Russia.

Here we have your diagram [the "typical collapse function," or "triple curve"]. It shows the rate of issue of money, then the rate of issue of secondary paper obligations, and here we have the decline of production, worldwide. First question: At the moment of what you call the "super-crisis" [gestures to vertical line where the curves go off the chart], lasting two or three days, there will be an explosive emergence of a new, worldwide ideology. My question is: Is, then, physical economy, perhaps, metaphysical, or a religion of the mind?

LaRouche: No, it's physical, and, in a sense, spiritual, in the sense that, the belief that *money* is the economy, *is a lie*. Money should be nothing but an arrangement, created by governments, and used by governments for their internal administration and external relations. Any time government doesn't recognize that, we create, as we have now, bubble economies. To get at the psychological side, remember now: The U.S. economy is collapsing — physically, it's collapsing. But CNN will insist that it's growing! What's growing is the

cancer — the person is shrinking! It's a bubble. The problem is, people believe in *money!* And, the little people believe in money, too. That's the problem. "I need *m-o-o-n-n-e-y-y!*" So, money becomes a god.

So, therefore, the state, and leaders, must not present money as a god, but must regulate the economy, to protect the people!

Q: Thank you. Therefore, my second and third question may be merged, in a sense. If there's no money, the epoch of a virtual currency begins, with the absence of money. Or, a "worldwide phase of communism." And, under those conditions, the Antichrist comes as the leader of the world, no? And, at the same time, you say that to study this and the entire invisible world of energy, requires a scientist to understand the existence of the world of the angels. When will science be prepared to undergo a paradigm-shift and accept the existence of invisible beings?

LaRouche: Well, I think, when you understand the principles of science —. For example, let me answer with the solution to this, which makes the answer clear. This is a concrete, actual question; it's not hypothetical.

At some point, very soon, the entire world, or virtually the entire world, will be financially bankrupt. We're not talking about an economic depression; we're talking about what Rosa Luxemburg and others talked about, at the beginning of the last century, as a general breakdown crisis.

What do we do? We certainly don't have a virtual international currency — that's chaos, and that *is* the Devil. What you do, is: Immediately, sovereign nation-states, which *own* the IMF, must put the IMF into bankruptcy. They act on the principle of universal natural law called "the general welfare." Each government creates a new series of currency; institutes national banking to replace private banking, as supreme; then, establishes a fixed exchange rate among the new currencies; organizes a gold-reserve standard for fixed currency rates among these currencies. Governments then enter into a series of long-term agreements. For example in Eurasia: Let's take the question of the Land-Bridge corridors. Put the Russian Transport Ministry, and the Railways Ministry, back into full business. These long-term contracts among governments become, then, a mechanism, by which governments assist private firms, in also making the same kinds of agreements.

The governments also, use the same principle of bankruptcy for *internal* reorganization: Pensions must be supported; evictions from homes must not occur; employment levels must be maintained and increased; essential firms must continue to function. All functions of government must continue to function. The idea is to make the transition, with the least amount of impact on the people, and move from a point of *failure*, of bankruptcy, to a point of growth. The problem we have today, is that the governments and the political parties are generally stupid, relative to what we had 20-30 years ago.

Hour One, the bottom line: On the day that people suddenly realize that the rich are no longer rich, and that money

is no longer god, then they're going to change their way of thinking—suddenly.

Moderator: Thank you, Mr. LaRouche. Thanks to all of you.