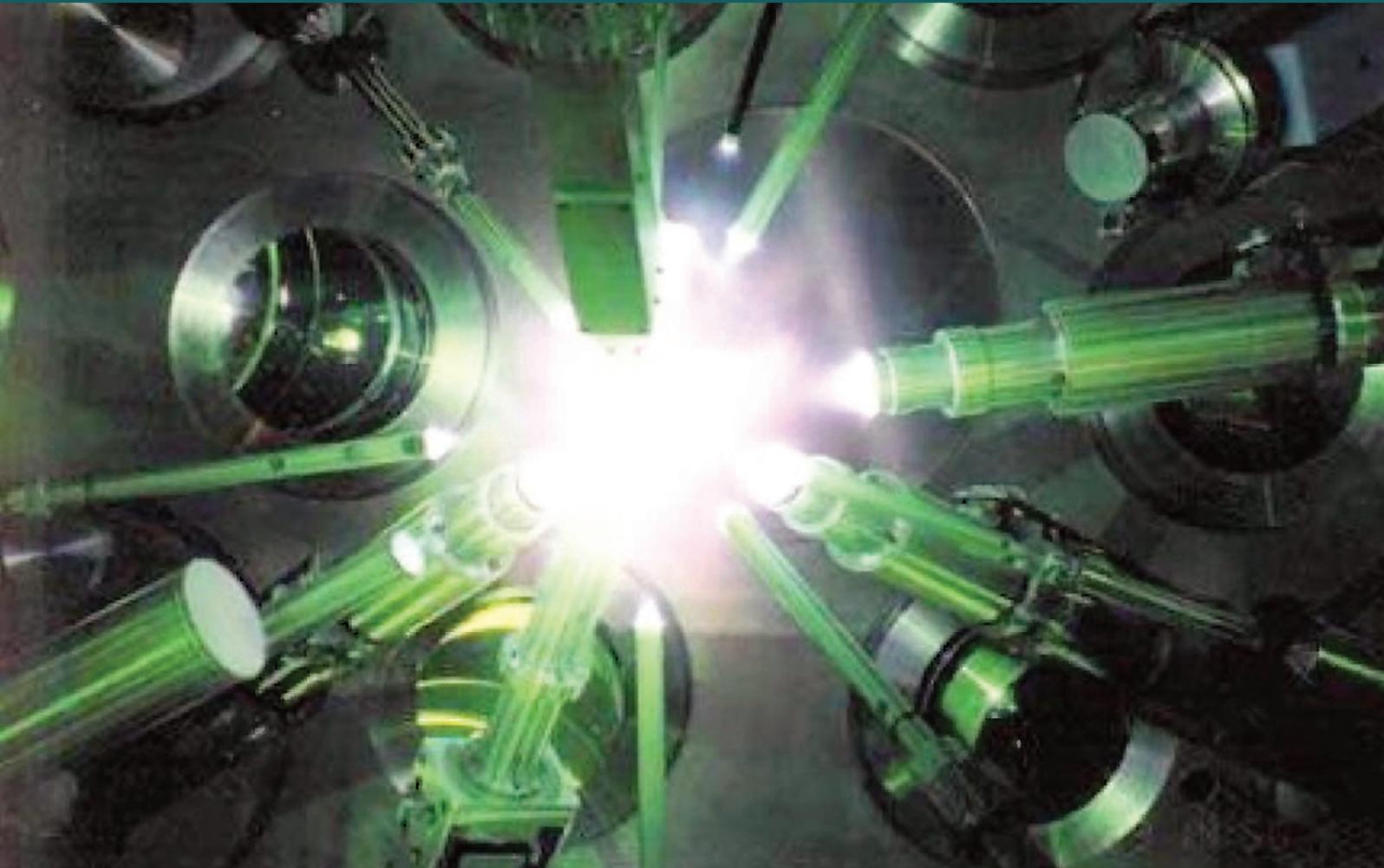


# EIR

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## Fusion and Fission Power in the New Bretton Woods System





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# Fusion and Fission Power in the New Bretton Woods System

## **EDITORIAL**

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# A Bridge to the Future

by Paul Gallagher

Nov. 11—*EIR* editorialized last week, “The American People Want an Economy,” writing, “A first look at the election results shows that what was most important was not the shift in control of the House, which had been pre-discounted, but that Americans demand a full-fledged economic recovery and growth policy. . . . This also indicates that voters insist that Democratic legislators stick to their duty of governing the country alongside the elected President, rather than devoting all their time to press leaks against him. From all indications, President Trump will push the same point, making himself wide-open to collaboration with Democrats on issues where they agree—largely economic issues.”

President Donald Trump made it clear the day after the election, and likely Speaker of the House Nancy Pelosi confirmed it: The key to bipartisan cooperation is legislation to fund and build new, basic economic infrastructure. Most Americans support it, demand it. Democratic “radicals” who want only to impeach or endlessly investigate the President are saboteurs. Republican “radicals” who oppose funding any government credit should be sidelined, exactly as Trump on Nov. 7 described doing that.

But to build that bipartisan bridge for legislative action, the United States needs to get in the practice of building real, new bridges—and high-speed railroads; building new power plants and power technologies; new waterways and ports; and serious technology for outer-space exploration and development such as new heavy-lift space-launch rockets.

### **We’re Not Building Anything Now!**

In a column this week, Rep. John Delaney of Maryland, one of the Democrats with a bill for an infrastructure bank, was agog about China’s new Hong Kong-Zhuhai-Macao bridge-tunnel, nearly 35 miles long over the sea and built for 120 years’ life! “And we’re not building anything!” Delaney cried.

He was right. We can’t get subway or metro trains to cross a city or a river without breaking down or derailling. We have no high-speed trains. We can’t build nuclear power plants and each American now gets less electric power every year. We can’t send astronauts into Earth orbit and bring them back safely; NASA doesn’t even have an active plan any more, to build launchers to put Americans back on the surface of the Moon.

President Trump is fighting uphill just to get us making steel and automobiles again, and maybe—less likely—aluminum. These are things the United States led the world in, 75 years ago.

Is this because the United States hasn’t had good engineers or scientists? No, it’s because, since the Vietnam War, and the British destruction of President Franklin Roosevelt’s Bretton Woods monetary system, American elected officials have not provided the credit for any big infrastructure ticket unless it was an aircraft carrier, fighter-bomber or a new tank.

Today the most serious Democrats, the most committed to what Rep. Peter DeFazio (D-OR) calls “real funding for real infrastructure,” are far short of even the

American Society of Civil Engineers' \$4-5 trillion price tag just to maintain and replace the existing basic infrastructure in coming years. They are talking about funding molehills, compared to the mountainous new frontiers of high-technology infrastructure being mastered by China, Japan, Russia—in nuclear power—and India—in space technology.

The United States needs to be building the most advanced and critical projects in the world—the Kra Canal to link the Pacific and Indian Oceans; the Transaqua project to restore Lake Chad and save Sub-Saharan Africa from becoming a desert; nuclear desalination to stop desertification of our own West; the Bering Strait bridge-tunnel to link North American transportation to Eurasia. Where on the globe we build them *makes no difference*; they will rebuild the U.S. economy's industrial and technological muscles.

This can be done, but only by cooperating with the other industry- and infrastructure-champion countries. Lyndon LaRouche has outlined it since the turn of this century. A New Bretton Woods—a four-power agreement with China, Russia and India, open to other industrial powers like Japan, to create credit on the scale of many trillions, for infrastructure projects that will transform economies, human productivity and living standards. Because of the informal but international reserve status of the U.S. dollar, this New Bretton Woods credit system requires United States participation above all.

Within that leap forward, a bipartisan Trump-Democratic move for infrastructure can really be a bridge that goes to somewhere. Let's look to the President's proposed summits with Presidents Xi and Putin in coming weeks and months and organize for a New Bretton Woods to emerge.

## Cover This Week

*Fusion: high-powered lasers are trained on a deuterium/tritium capsule at the National Ignition Facility.*



NIF

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# I. A New International Treaty on Controlled Fusion- and Fission-Power

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## The Time is Long Overdue for A Crash Program To Develop Fusion Under a New Bretton Woods Treaty

by Bruce Director

Nov. 11—The article, which follows, by Joel DeJean, an electrical engineer with experience in the defense industry and a long-time associate of Lyndon LaRouche, provides an important brief summary of three new approaches for the development of compact fusion reactors. When considered against the background of the current and future state of the world economy, the emerging potential for a new set of economic relationships among nations replacing “globalism” (a euphemism for the British Empire), and the current state of government and private initiatives to develop fusion, DeJean’s article implies the obvious: *it is long past time for an international cooperative effort, among governments and private companies, to launch a full-scale crash program to bring operating fusion power production on line in the immediate future.*

That harnessing controlled fusion power would revolutionize the world economy is well accepted. That it is a necessity, is nevertheless poorly understood. Many in policy-making circles, economists, scientists and the public at large, believe that, though harnessing fusion would be nice, a combination of existing power technologies (primarily fossil fuels and nuclear fission) is sufficient for global economic growth for the foreseeable future. We disregard here the specious arguments about low energy-density technologies such as wind and solar.

While, perhaps, from the standpoint merely of energy production requirements, that might be true, yet this view misses the fundamental point. Certainly, a vast expansion of fossil-fuel and nuclear technologies

(especially the respectively newer innovations in these areas) is necessary, and may be adequate for the time being. Such an expansion of existing technologies, in the short-term, can maintain the existing state of the economy, as well as support the vast expansion represented by China’s One Belt One Road program, or the efforts underway and proposed for rapid industrialization of the underdeveloped parts of Asia, Africa and the Americas.

*But, ultimately fusion power will be required, and it must be harnessed for reasons fundamental to the nature of man.*

Lyndon LaRouche has long emphasized the importance of fusion in this regard, placing it at the pinnacle of his operative “[Four Laws to Save the USA.](#)” As DeJean notes in the introduction to his article, nuclear fusion is a fundamental physical process prevalent in the universe.

As DeJean indicates, until as recently as 66 years ago, mankind only could harness the derivative effects of cosmic fusion power. With the detonation of a hydrogen bomb, mankind began the process of bringing this fundamental physical principle under conscious human control. Many peaceful uses of this semi-controlled explosive fusion power have been proposed. The late Dr. Edward Teller’s “Operation Plowshare,” for example, proposed the use of hydrogen bomb explosions for large-scale excavation projects, such as the still-unbuilt Kra Canal in Thailand, and the use of underground hydrogen bomb explosions to run electrical generators. Fully controlled fusion power would open a myriad of new

potentials for the economic development of mankind.

More important, however, is the effect that the pursuit of this effort, and its eventual success, will have on the creative power of mankind itself. Understanding the fundamental physics involved in bringing about a fully controlled fusion reaction is, perhaps, the greatest scientific challenge mankind has ever faced. It requires a complete reconceptualizing of our current understanding of the fundamental principles of the physical universe, would replace the existing hodge-podge of physical theories that have been built up over the last 100 years or so, and usher in a new level of understanding of man and nature. Elaborating this challenge is beyond the scope of this introduction, but it touches upon the fundamental questions of science raised, in particular, by Max Planck, Albert Einstein, V.I. Vernadsky and, most important, Lyndon LaRouche.

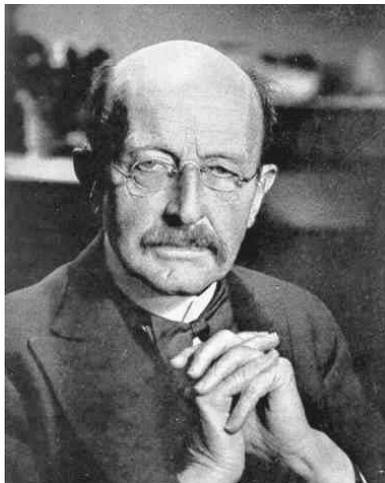
The story can be summarized, albeit all too briefly, as follows:

By the beginning of the twentieth century, mankind's scientific understanding of the universe had reached a turning point. As Planck put it, the apparent divisions of physical processes corresponding to sense perception, had been revealed to be merely artifacts. Light, heat, matter, energy, particle, wave, chemical, and nuclear, were all beginning to be understood as different manifestations of physical transformations. The object of science turned to gaining more conscious control over these transformations—hence, the development, for example, of capabilities such as greater control over fission and fusion, and lasers.

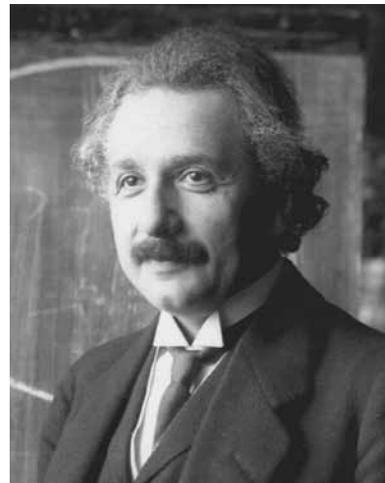
Unfortunately, this breakthrough in scientific understanding coincided with a disastrous downturn in human affairs, as exhibited by the monstrous death and destruction that characterized the 20th century. As a result, or perhaps, in a certain sense, a cause, the scientific theories that arose in response, such as quantum mechanics, reflected the pessimism of the time. Hence, the progress in technological application of these scien-

tific principles occurred *in spite of* the prevailing scientific theory.

V.I. Vernadsky's research showed that the division between abiotic, biotic and noëtic processes had to be reconceptualized from the standpoint of the interaction and transformation among these three, seemingly inde-

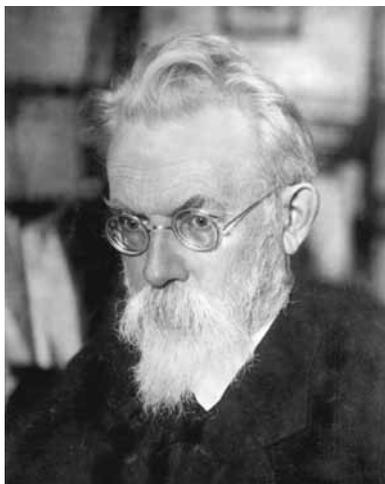


Max Planck

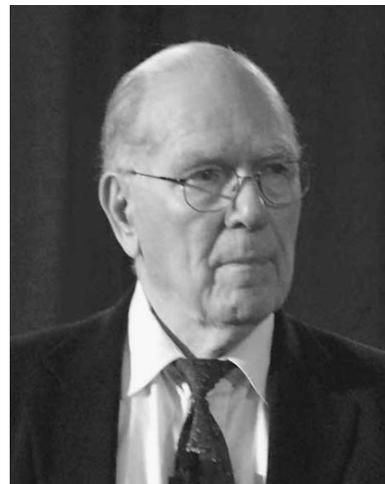


Ferdinand Schmutzer

Albert Einstein



Vladimir I. Vernadsky

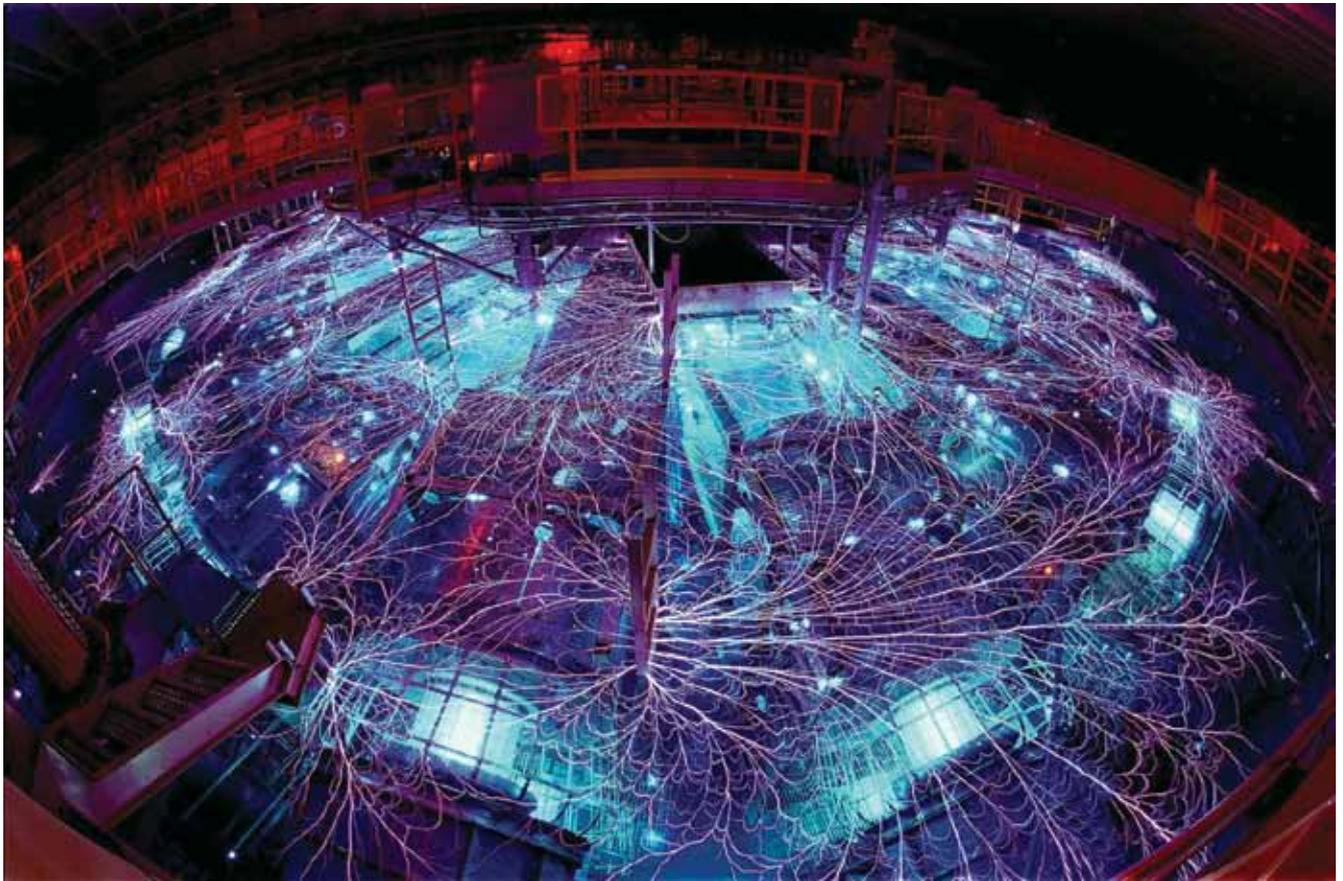


EIRNS/Stuart Lewis

Lyndon H. LaRouche, Jr.

pendent domains. The development of these processes on the Earth indicated an increasing dominance of living processes over the abiotic, and noëtic over the other two.

LaRouche, in his science of physical economy, recognized that a higher, fourth domain, of human interaction, acting among and across generations, to increase the creative power of man over himself and nature, was a higher, active, governing principle in the universe



Sandia National Laboratories

*Sandia National Laboratories' "Z Machine," the world's largest X-ray generator, is used in fusion research to determine how materials will react under high pressures and temperatures.*

itself. As mankind extended its conscious control over these processes on the Earth, and beyond, it increased the creative power of the individual, as well as of mankind as a whole.

An effort to harness fully-controlled fusion, combined with an international effort to extend human economic activity from the Earth to the Moon and beyond, uniquely provides the basis to facilitate this development of mankind. As mankind cooperates in these efforts, we will gain greater power to master, and understand, our own creative powers in and over the universe. A new understanding of physics will emerge.

A fundamental breakthrough on this level, though inevitable, may not be necessary for the harnessing of a fully controlled fusion reactor, but without a crash program for the development of controlled fusion, it won't come about at all. Thus, it is incumbent on mankind to marshal all its available intellectual and material resources to embark on this quest with the

intensity and passion of great undertakings such as the 1960s project of the U.S.A. to put a man on the Moon. Yet the effort to harness controlled fusion is much bigger. Only an international effort is appropriate for the task. It must first start as a key focal point of the four-power agreement among the U.S.A., Russia, China and India, proposed by LaRouche, and then incorporate the scientific resources of all nations. The funding constraints that have characterized fusion research must be broken, and a full commitment made.

The effort is central to forging the new relations among nations, whose potential is now upon us. But, even more important, it is essential to developing a new characteristic of man. As LaRouche stated in his fourth law, it means, "*The essential distinction of man from all lower forms of life, hence, in practice, is that it presents the means for the perfection of the specifically affirmative aims and needs of human individual and social life.*"

# Overview of Progress in Compact Magnetic Fusion Reactors

by Joel DeJean

Nov. 10—Fusion powers the Sun, and all the stars in the universe. It is the process whereby lighter elements, such as hydrogen, are fused, to form heavier elements, such as helium. As described by Einstein's  $E = mc^2$ , the less than 1 percent of mass that is "lost" in the process is converted to a very large amount of energy, over a million times more than is possible in any chemical reaction. According to one standard theory, our Sun has had the great gravitational mass to provide the heat—15 million degrees Celsius at its core—density of plasma, and containment time, to allow this process to continue for over 4.5 billion years.

For the last 66 years, Man has been able to achieve fusion using isotopes of hydrogen, deuterium and tritium, and, by providing sufficient heat and plasma density-containment time, using a fission bomb as a trigger, to release great amounts of energy, but in an uncontrolled manner. In 1961, the Russians tested a thermonuclear device, the Tsar Bomba, that released over 50 megatons of TNT equivalent, more than 3,000 times the energy released by the bombs dropped in 1945 on Hiroshima and Nagasaki, Japan.



*The National Ignition Facility at Lawrence Livermore Laboratory.*

LLNL

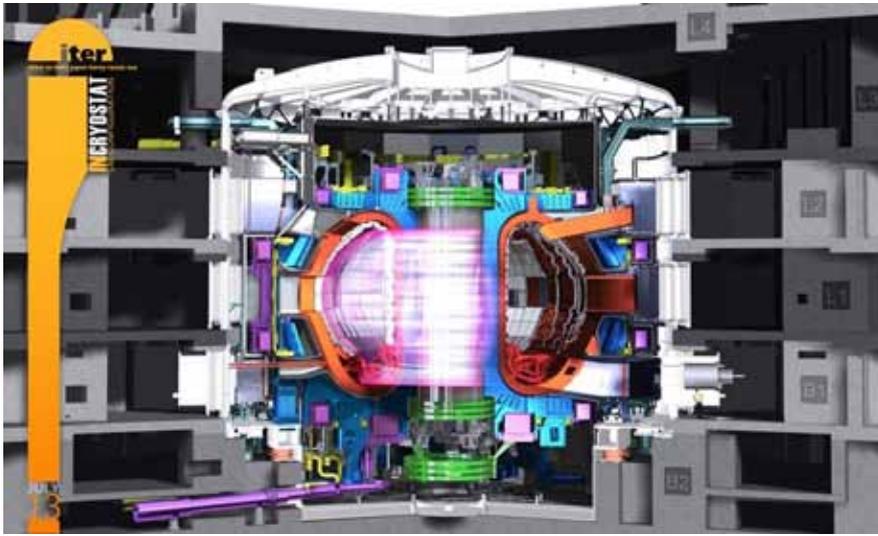
Our goal, however, is to achieve controlled thermonuclear fusion, using magnetic fields to create and contain a plasma of deuterium and tritium—or alternatively, to use high-powered lasers to heat and compress a capsule of deuterium and tritium. We need temperatures of around 100 million degrees Celsius, plus plasma densities and containment times that allow us to exceed breakeven—the point at which the output energy exceeds the input energy required to start the fusion process.



NIF

*This past June, the National Ignition Facility, part of California's Lawrence Livermore National Laboratory, reported that it had produced 19 quadrillion fusion neutrons in a test shot using a deuterium/tritium capsule. Fifty kilojoules of energy was released, bringing the plasma to within only one order of magnitude of what will be required to reach ignition and breakeven.*

Meanwhile, over the last 20 years, several private companies have been designing compact magnetic fusion reactors, using cylindrical vessels employing the magnetic field-reversed



ITER

*The International Thermonuclear Experimental Reactor (ITER) is being built in southern France by a consortium of 35 nations, including the U.S., Russia, the European Union, China, India, Japan, the Republic of Korea, and others. Its goal is to produce 500 megawatts (MW) of power for 10 minutes, from an input power of 50 MW—an increase by a factor of 10. The testing of ITER is scheduled to start in the early 2020s. ITER is the world’s largest tokamak—29 meters high, 29 meters wide, weighing over 23,000 tons, and employing the largest superconducting magnets ever designed.*

configuration (FRC), in which an axial magnetic field, created by poloidal magnets around the cylinder, is reversed by toroidal currents in the plasma, producing a self-stabilized rotating plasma, which is then heated by radio-frequency fields or particle beams. These designs produce a high beta (a high ratio of plasma pressure to magnetic pressure). Their outputs are designed to be in the 10 to 100 MW thermal range.

Three of the most advanced projects follow.

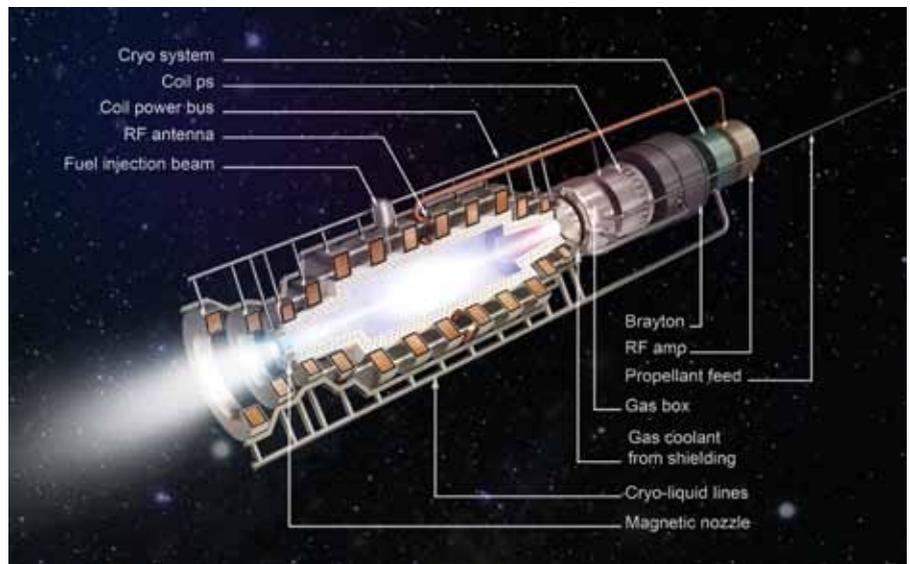
### **Aneutronic Reactions**

Princeton Satellite Systems has been working on a Direct Fusion Drive (DFD) reactor, under a NASA Innovative Advanced Concepts contract. Working closely with the nearby Princeton Plasma Physics Lab, and using the field-reversed configuration for cylindrical shaping,

plasma is created using superconducting magnets both around and inside the cylinder. The company is using deuterium and helium-3, producing an aneutronic reaction, that is, fusion in which neutrons carry no more than 1% of the total released energy, plus an alpha particle (that is, two protons and two neutrons—a helium-4 nucleus) and a proton that can be used as propellant by way of a magnetic nozzle. Since aneutronic fusion greatly reduces problems associated with neutron radiation such as ionizing damage and neutron activation, biological shielding may be lessened, remote handling becomes easier, and the overall environment is safer. Output will be in the 10 MW thermal range. PSS has proposed using a cluster of 6 DFD engines to send a crew onboard a Deep Space Habitat module on a flyby of

Mars.

Last July, this author visited Michael Paluszek, president of PSS, and his staff. You can watch an [interview](#) with Paluszek conducted July 26 by La-



Princeton Satellite Systems

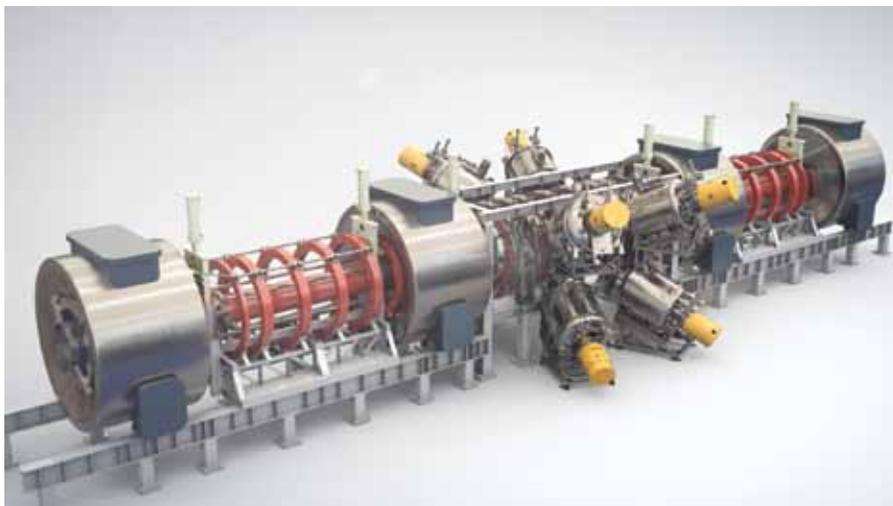
*Artist’s rendering of the Princeton Satellite Systems’ direct drive fusion propulsion engine, with interior exposed to show detail of the magnetic coils. This engine uses radio-frequency heating to reach fusion conditions, with helium-3.*

Rouche PAC Science Research Team member Megan Beets.

A second aneutronic concept, that of TAE Technologies (formerly Tri Alpha Energy) was presented to the July 1, 2018 Schiller Institute conference in Germany by Dr. Armin Azima of Hamburg University. Its latest generator, called “Norman,” is named after the company’s late intellectual co-founder, Dr. Norman Rostoker. Unveiled in 2017, over 3,000 experiments have been performed on Norman. TAE is using Boron-11 and a high-speed proton, resulting in an aneutronic reaction of 3 alpha particles. This concept is more complex, using colliding FRC plasmas, requiring plasma temperatures of 3 billion degrees Celsius. TAE has backing from Goldman Sachs, Google and a Russian company. Its goal is also in the 100 MW thermal range.

### Neutron Heating

The Skunks Works unit of Lockheed Martin has been working on a compact magnet fusion reactor



TAE Technologies

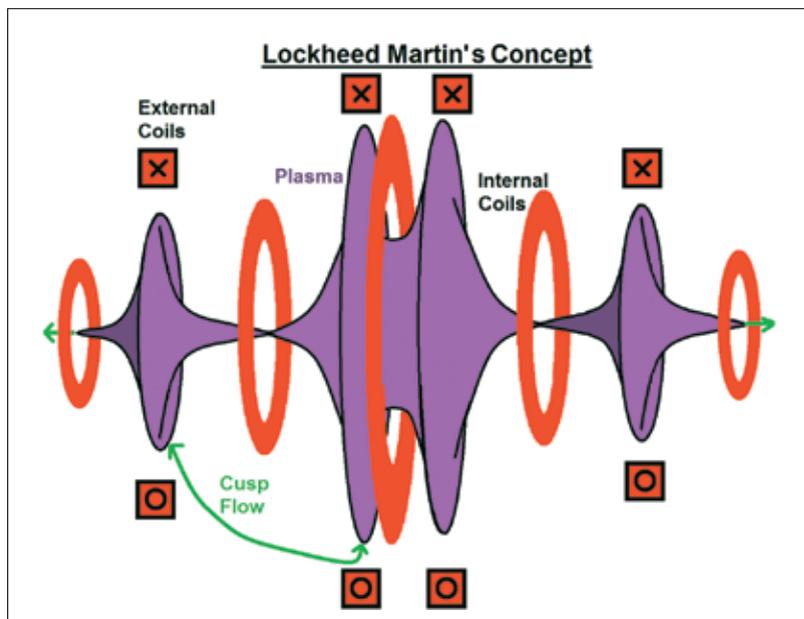
*Using its latest generator, known as “Norman,” TAE Technologies is focussing its current work on plasma merging and field-reversed configurations (FRCs) to achieve optimal, scalable conditions for clean, safe fusion.*

since 2014. Its motto is “No mission is impossible.” Its approach is also a high-beta concept, using a high fraction of the magnetic field pressure, or all of its potential, to make devices ten times smaller than previous concepts, perhaps replacing devices that must be housed in large buildings with one small enough and light enough to fit on the bed of a truck! The team is using deuterium and tritium, with a lithium blanket to generate tritium and heat transfer. Its goal is to attain 100 MW of thermal output. Using a cylindrical shape and FRC, lead design engineer Thomas McGuire is hoping to have a working prototype by 2019.

None of these three designs has reached breakeven, but if incorporated into a crash program, with the open patents concept as used during the Apollo program, one or more of them could lead to a breakthrough in the next five to ten years, providing the world’s economy with the largest leap in energy flux-density since the Manhattan Project of World War II and fulfilling LaRouche’s Fourth Law.

### Reference

“[The Promise of Fusion Rocketry](#),” by Joel DeJean, *EIR*, July 21, 2017.



Creative Commons

*Conceptual schematic of Lockheed Martin’s truck-sized high-beta compact fusion reactor.*

## FOUR-POWER PRIORITY

# Mass Production of Modular Nuclear Reactors To Industrialize Developing Countries

| Until Fusion Power Comes Online

by Ramtanu Maitra

Nov. 10—There are many apparent reasons why the United States has virtually abandoned its nuclear power generation growth. One of the reasons is that the U.S. attitude to industrial development has undergone a sea-change over the last three to four decades. In the 1950s, electricity consumption grew at an annual rate of almost 12 percent. Throughout the 1960s through 1970s, that growth rate hovered between 5 to 8 percent before it collapsed to zero and below zero, resulting in the cancellation of new power generation plants with the approach of this millennium. All this happened because the powers-that-be in the United States chose to move the nation's focus away from maintaining the country as an industrial powerhouse through modernization and innovation, to instead become increasingly a financial hub—pursuing the British model.

Adopting such an active de-industrialization policy—and allowing basic heavy industries to ebb and wither—coupled with a steady infiltration of anti-nuclear activists at various policy-making levels into the U.S. government during the same period, took a heavy toll on the growth of the nuclear power sector. The stagnation of the industrial sector in this country that dragged down the nation's overall productivity, as well as the interrelated decline of the power sector—nuclear in particular—was perhaps an important reason why the nuclear industry did not diversify to usher in other, and equally important, ingredients.

One of the key areas of nuclear development that has been largely ignored during the recent decades has been the development of small modular nuclear reactors (SMRs), a technology which would rejuvenate the



Courtesy of Nuclear Energy Institute  
*President Eisenhower symbolically starts up the first U.S. commercial nuclear power plant at Shippingport, Pa., in 1954.*

nuclear sector and establish a future for the nuclear power sector worldwide. One may argue that the United States does not need small reactors since it has the basic transportation and industrial infrastructure and the

strong electrical grid needed to support large, “economy of scale” reactors. That is a valid argument. However, there are important reasons why small modular reactors should have been made commercial decades ago.

### The Need for Modular Reactors

Looking back, it becomes apparent why nuclear power was born in the more advanced, developed nations. The development of such front-line technology required prime resources, including very skilled manpower in the form of scientists, experimentalists, engineers—and accompanying scientific and technological institutional infrastructure. It also needed a significant level of physical infrastructure, including power and transport, an industrial base, and an economy that generates surplus wealth. The initial development of peaceful nuclear energy took place exclusively in countries that already had a developed electrical power system. The attraction of nuclear power for these countries was the potential to accelerate the process of development, while not having to depend on such finite resources as coal and gas.

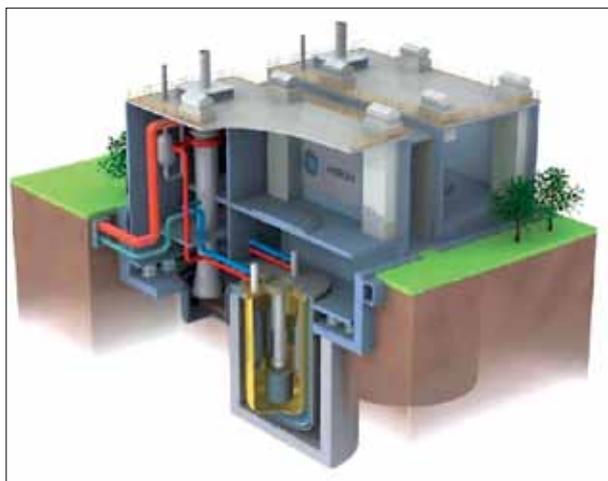
In other words, nuclear power did not help any country to develop an electrical power infrastructure from scratch. In recent years, China, and to a certain extent India—both now among today’s nuclear power generating nations—have succeeded in developing their electrical power capacity significantly, but neither did so using nuclear power. Nuclear power’s contribution to these coun-



U.S. NRC

*Toshiba 4S sodium-cooled small reactor, is intended to be operated underground with a turbine building on the surface, and has an electrical output of 10 MWe (30 MWt).*

responsibility of private entrepreneurs. The installation and daily operation of these reactors also belongs to the private sector. The U.S. government only comes in as the regulator. For the private utility, the prime objective is to make nuclear power economically competitive with coal, gas or hydro. Under the circumstances, the only objective of the private sector is how to optimize profit by building these reactors to fit the economy of scale. Even today, six decades later, this remains the primary concern for those who are building nuclear power plants and supplying power to consumers in the United States.



wikipedia

*PRISM (Power Reactor Innovative Small Module), a nuclear power plant design by GE Hitachi Nuclear Energy (GEH).*

tries came later, mostly for supplementing the power growth, or replacing any number of less-productive or polluting power sources. According to a recent report of the International Energy Agency, nuclear power production will grow by about 46 percent by 2040—and more than 90 percent of the net increase will come from China and India.

Since development of nuclear power was initially the concern entirely of the industrialized West, where bulk power was the need of the hour, this provided little incentive to develop smaller reactors where the production of electricity is more expensive than with the larger reactors.

In the United States, the manufacturing of nuclear reactors, generators, etc., is the responsibility of private entrepreneurs. The installation and daily operation of these reactors also belongs to the private sector. The U.S. government only comes in as the regulator. For the private utility, the prime objective is to make nuclear power economically competitive with coal, gas or hydro. Under the circumstances, the only objective of the private sector is how to optimize profit by building these reactors to fit the economy of scale. Even today, six decades later, this remains the primary concern for those who are building nuclear power plants and supplying power to consumers in the United States.

Unfortunately, such a market-driven approach obscures the true, far-reaching importance of nuclear power. It is not simply a reliable source of continuous electricity. Rather, understood from Lyndon

LaRouche's conception of *energy flux-density*, it becomes a *revolutionary* ingredient in developing the basic infrastructure and productive power of the nation. Here lies the importance, and the future, of small modular reactors.

### Economy of Scale for Reactors

Since nuclear power generation began in the 1950s, the size of reactor units has grown from 60 megawatts (MW) to more than 1600 MW, with corresponding economies of scale as the driving force. At the same time, many hundreds of smaller power reactors have been built for naval use and as neutron sources, yielding enormous expertise in the engineering of small power units. These small reactors did not seek the economy of scale, but catered to a vital need where cost was a secondary factor.

In their paper, "Nuclear Reactors: Generation to Generation," authors Stephen M. Goldberg and Robert Rosner pointed out that "Generation I" refers to the prototype and power reactors that launched civil nuclear power. This generation consisted of early prototype reactors from the 1950s and 1960s, such as Shippingport (1957-1982) in Pennsylvania, Dresden-1 (1960-1978) in Illinois, and Calder Hall-1 (1956-2003) in the United Kingdom.

The Second Generation, or "Gen II," includes pressurized water reactors (PWRs), which began operation in the late 1960s and comprise the bulk of the world's 400+ commercial PWRs and boiling water reactors (BWRs) that are in operation today. These have an expected life-span of about 40 years, although many have exceeded that life-span and will remain in operation for at least 20 more years.

There are other types of reactors, such as Canada's heavy water reactors (CANDU) that are also recognized as Gen II reactors. Gen II designs require relatively large electrical grids and have a safety envelope based on Western safety standards. The economics of existing Gen II plants and of those under construction or in the planning stage are generally favorable, particularly in some parts of Asia.

Gen III nuclear reactors are essentially improved Gen II reactors. These improvements in Gen III reactor technology are aimed to extend the operational life to 60 years, potentially to greatly exceed 60 years, prior to com-



Model of the Toshiba ABWR, which became the first operational Generation III reactor in 1996. wikipedia

plete overhaul and reactor pressure vessel replacement.<sup>1</sup>

While these developments enhanced the economy of scale, they also pushed aside the development of small reactors, because of the latter's much higher megawatt-to-megawatt cost when compared to these Gen II or Gen III reactors. But the story has a downside. Now that the United States has not built a nuclear power plant for decades, and in the context of the de-industrialization of the nation, the ability to manufacture ultra-heavy forgings—each of which weighs greater than 400,000 pounds—a necessity for the Gen III reactors, no longer exists in the United States. At this point, the United States is today simply incapable of producing a Gen II or Gen III nuclear reactor.

### U.S. Can't Make Gen III Reactors

Peter Alpern wrote in 2009,

Four of the most complex parts of a nuclear power plant—the containment vessel, the reactor vessel components, the turbine rotors and steam generators—are made from over 4,000 tons of steel forgings, and almost none of those components are manufactured in the United States. The reactor vessel functions like the outer shell of an egg, protecting all the vital internal pieces, including the components in which the nuclear reaction takes place. The outer vessel

1. "[Nuclear Reactors: Generation to Generation](#)," by Stephen M. Goldberg and Robert Rosner. American Academy of Arts & Sciences, 2011.

alone weighs over 500 tons and is made up of seven very large forgings, including several that make up the nozzle.

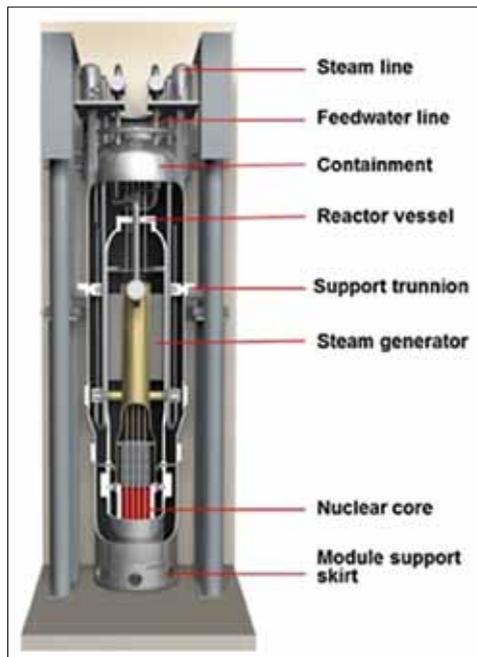
The newest nuclear plant design on the market, the Generation III Evolutionary Power Reactor (EPR), from the French nuclear engineering group Areva, uses four steam generators—each of which weighs up to 500 tons. A generator rotor weighs in excess of 200 tons, according to Craig Hanson, vice president and product line manager for nuclear plant builder Babcock & Wilcox. And, for each nuclear plant, there are three to four turbine rotors....<sup>2</sup>

The Gen III reactors require steel ingots weighing between 500 to 600 tons each. No steel producers in the U.S. can handle that size or weight, says Chris Levesque, Areva’s president and general manager at its Newport News, VA, facility for fabricating heavy reactor components:

Forgers are limited because while [a forger] can make his press bigger and he can make his machine tools bigger, he needs a larger ingot. He’s limited by the steel mill and the ability of not just a mill that can make that big of an ingot, but [can] also transport it to him by rail. You’re talking about a piece of metal that’s huge and needs to stay hot and get from the mill to the forge. One of those mills can’t exist just to supply the forge.

The largest U.S. ingot manufacturer, the now defunct Bethlehem Steel, could produce an ingot of about 380 tons—good enough for the Gen II reactors, but not so for the Gen III reactors. And that Bethlehem Steel capability no longer exists.

While America dismantled its capabilities vis-à-vis heavy forging, new heavy forgers have emerged—not



U.S. NRC

*The proposed NuScale reactor building is designed to hold 12 SMRs. Each NuScale SMR has a rated thermal output of 160 MWt and electrical output of 50 MWe, yielding a total capacity of 600 MWe for 12 SMRs.*

many, but a few. According to Alpern’s article, Japan Steel Works (JSW) is by far the largest, providing 80 percent of the large forged components for all nuclear power plants being built in the world today outside Russia, including the steam generator, reactor pressure vessels and turbine shafts. Several other countries are also involved in Gen III, or similar, reactors, and heavy forging capacity is emerging in those nations, including China (China First Heavy Industries) and Russia (OMX Izhora), along with new capacity emerging in South Korea (Doosan) and France (Le Creusot). It is also being planned in the U.K. (Sheffield Forgemasters) and India.

### What SMRs Promise

In May 2018, a Portland, Oregon-based company, NuScale Power, announced that its design of a small modular nuclear reactor (SMR) had completed the Phase 1 review of its design certification application (DCA) by the U.S. Nuclear Regulatory Commission. According to analysts, Phase 1 is the most intensive phase of the six-phase review, taking more hours and effort than the remaining five phases combined.

What NuScale’s SMR is offering is twelve 50 MW reactors combined, a scaled-down version of large, light water reactors that can be put together module-by-module to develop a generating capacity of 600 MW. Recently, NuScale says its SMR will produce 20 percent more power than what it was designed for.<sup>3</sup> Because the plant has not been constructed and no power has yet been generated, such claims must remain hypothetical until proven.

What is evident from the cost of the 12-50 MW SMR designed by NuScale, or any other small modular reactor, is that when developed, these reactors, megawatt-for-megawatt, will be more expensive than Gen III large nuclear reactors. However, that cost difference

2. “U.S. Cedex Capability for Largest Nuclear Forgings,” by Peter B. Alpern. *Forging*, June 16, 2009.

3. “Breakthrough for NuScale Power: Increase in Its SMR Output Delivers Customers 20 Percent More Power,” NuScale News Release, June 6, 2018.

can be reduced significantly if the SMRs are mass-produced. Even with the higher cost, it is clear that SMRs have a large role to play in the coming decades, particularly in the developing countries.

According to a report, “Small Nuclear Power Reactors,” which can be found on the World Nuclear Association’s website:

Small modular reactors (SMRs) are defined as nuclear reactors generally 300 MW equivalent or less, designed with modular technology using module factory fabrication, pursuing economies of series production and short construction times.<sup>4</sup>

It is evident that a number of countries, such as China, Russia, Korea, Canada, India, and Argentina, have developed small nuclear reactors, but very little is known about these countries’ efforts to produce them as modular units, which would make their production and deployment far more effective.

According to the Canadian Small Modular Reactor Roadmap, there are over 150 proposed designs for SMRs worldwide. The national nuclear science and technology organization, Canadian Nuclear Laboratories (CNL), has set a goal of building a new SMR on its Chalk River site by 2026. In June 2017, the Canadian company, Terrestrial Energy, began a feasibility study for the siting of the first commercial Integrated Molten Salt Reactor at Chalk River. To say the least, this is still at an embryonic stage.

China is also developing a 100 MW SMR, designed by the China National Nuclear Corporation. Called the Linglong One, this ACP100 nuclear reactor has completed its preliminary design stage and is qualified for construction in Hainan province this year. Its first use will be to generate heat for a residential district, replacing coal-fired boilers.<sup>5</sup>

All that the Canadian Small Modular Reactor Roadmap tells us is that the SMRs are under development in many countries, and there is a strong likelihood that some of them might become operative within a decade. Some of these reactors could be High Temperature Gas-Cooled Reactors or even Pebble-Bed reactors. However, little is known of their progress, or the timetable.

What is at hand though, is the definitive work done

by NuScale and its success in completing the Phase 1 review of its design certification application by the U.S. Nuclear Regulatory Commission. The NuScale SMR is an advanced light-water reactor. Each module is a self-contained unit that operates independently within a multi-module configuration. Up to 12 modules are monitored and operated from a single control room. The entire reactor sits within a containment vessel 65 feet tall and 9 feet in diameter. NuScale’s Russell Ray describes the process in this way:

The reactor and containment vessel operate inside a water-filled pool that is built below grade. The reactor operates using the principles of natural circulation; hence, no pumps are needed to circulate water through the reactor; instead, the system uses a convection process. Water is heated as it passes over the core, and as it heats up, the water rises within the interior of the vessel. Once the heated water reaches the top of the riser, it is drawn downward by water that is cooled passing through the steam generators.

The cooler water has a higher density. It is pulled by gravity back down to the bottom of the reactor where it is again drawn over the core. Water in the reactor [cooling] system is kept separate from the water in the steam generator system to prevent contamination. As the hot water in the reactor system passes over the hundreds of tubes in the steam generator, heat is transferred through the tube walls and the water in the tubes turns to steam. The steam turns turbines which are attached by a single shaft to the electrical generator. After passing through the turbines, the steam loses its energy. It is cooled back into liquid form in the condenser, then pumped back to the steam generator.<sup>6</sup>

### **SMR Advantages for Developing Nations**

In addition to what Russell Ray describes, which emphasizes the safety part of the NuScale SMR, SMRs in general have many advantages that are of particular importance to countries with weak basic infrastructure. To begin with, the major components of SMRs will be small enough to be made on a production line in a factory, rather than being assembled one item at a time.

4. “[Small Nuclear Power Reactors](#).” World Nuclear Association.

5. “NuScale’s Small Modular Nuclear Reactor—Reliable, Resilient and Flexible,” by James Conca. *Forbes*, June 22, 2018.

6. “[Can SMR Technology Revitalize the Business of Nuclear Power?](#)” by Russell Ray. *Power Engineering*, June 13, 2018.

That means it will be fully set up in a controlled environment away from the wind, rain, and sand—typically present at a construction site—that often delay construction and assembly.

Among the other advantages, these SMRs provide easy transportability. Since they are only 65 feet tall, 9 feet in girth, and weigh about 300 tons, they could be transported from the factory to the construction site by boat, truck, or even railway car—a task that many developing countries’ infrastructure can bear. Another advantage is that SMRs have much smaller emergency planning zones (EPZs), which is the area expected to be affected by a nuclear accident that results in the release of radioactive material.

SMRs require fewer materials and resources, bringing down the one-time capital cost. That suggests the country using SMRs can add power in smaller increments. It also means that the countries with a weak electrical grid—which is a serious problem in most of the developing countries and presents major obstacles to setting up a large single power generation unit—will be able to set up SMRs, which, in return, will provide a steady source of power to develop basic infrastructure, including the strengthening of the electrical grid.

There are other smaller advantages. For instance, a large nuclear power plant needs to change fuel once every 18 to 24 months. Outages are scheduled for the spring or fall when electricity demand is lowest. The outage required for a scheduled refueling is usually no more than 40 days, but during that period, no power is generated or delivered by that plant. In the case of SMRs, although it could be five to six years before a shut-down of one of the modules would be necessary to carry out the fuel change, such refueling outages can be staggered, allowing a module-by-module fuel change. This would enable a multi-module unit to carry on supplying power at near capacity throughout its life-time.

SMRs, once developed and proliferated, will also be the anchor for desalination of sea water and brackish water. Desalination of water along vast coastal areas is an essential ingredient for economic development in many developing countries and island nations. Recently, Ibrahim Khamis of the International Atomic Energy Agency was cited as emphasizing that this is not a new idea. Its feasibility and reliability have been well-proven, and there is the added advantage that the nuclear power plants can supply either thermal or electrical energy, or both, at varying scales. According to Khamis:

We can think of nuclear-powered desalination in

terms of two main applications. One is to serve make-up water resources for the plant; the other is to produce potable water. Both applications have already been demonstrated.<sup>7</sup>

In addition, perhaps the greatest advantage of proliferating these SMRs is that they can be located in areas where the population is sparse, and the growth potential is vast—a very common phenomenon in Africa, in some parts of Asia, Central America and the Caribbean islands, for instance. These SMRs could jump-start the much-required developmental process—not in one stroke, but at a steady and escalating pace.

### **A Power-Starved World**

Despite the last six decades of commercial power generation, nuclear power, as an electrical power source, has not contributed to the electricity generating capacity of the “developing nations,” where power generation remains a crucial ingredient for building up the basic manpower, industry, and the absolutely necessary infrastructure of those nations. At present, the world can produce about 20 to 25 large, pressurized light water reactors and a few medium-size (about 700 MW) pressurized heavy water reactors per year, adding up to about 25-30,000 MW annually. That production capability is far, far below what the world needs. For instance, in the period between 2000 and 2010, China alone built about 26,000 MW of power generating capacity, mostly using coal and hydro-electric.

How little has nuclear power contributed to the developing nations? Take the case of the BRICS member nations. These are considered nations that are on the way to becoming developed nations. It is true that in Russia, India and China, nuclear power is growing, and these countries have developed the potential to become major nuclear power generating countries, but in Brazil and South Africa, nuclear power remains an insignificant player in their power capabilities. Brazil has only two reactors, producing about 3 percent of its power in a power-starved country. The same goes for South Africa, where two nuclear reactors at the Koeberg nuclear power station account for around 5 percent of South Africa’s electricity production. South Africa is vastly short of power, yet nuclear power is not playing any significant role.

Beyond those examples, one must take a look at

7. “[Nuclear-Powered Desalination](#),” by William Steel. *Industrial WaterWorld*, October 1, 2018.



Creative Commons

*Aerial view the CAREM-25 prototype reactor building under construction in Argentina.*

South East Asia, for instance. Existing in the vicinity of four nuclear power manufacturers—China, Japan, South Korea and India—none of the ten members of the Association of South East Asian Nations (ASEAN)—Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam—has a single nuclear power plant. Nuclear has not played any role whatsoever. Most of these nations desperately need a much larger electricity generating capacity for their growth.

In the entire continent of Africa, populated by 1.2 billion people, other than those two Koeberg nuclear reactors in South Africa, nuclear power has no presence. And, yet, Africa is crying out for more electrical power to grow and provide a future for today's, and tomorrow's, population.

Under current circumstances, these countries cannot have a serious nuclear program based on large nuclear reactors. They simply do not have the infrastructure, or the electrical grid system, to support large Gen III reactors. For instance, in Nigeria, with a population close to 190 million and the potential to become an economic giant, its transmission system does not even cover large parts of the country. Currently, it has the capacity to transmit a maximum of about 6 GW, and the system is technically very weak, thus very sensitive to major disturbances. For connecting a large nuclear power plant (say, 1,000 MW), the estimated capacity of a smooth-running grid required is at least 10 GW. (In other words, a single power generation source's capacity is not to exceed 10 per cent of the grid capacity for smooth distribution.)

The situation in most of the rest of Africa, in terms of infrastructure and electrical transmission capacity, is far worse than in Nigeria.

A similar situation exists in all of the Caribbean and Central American countries, in the vicinity of the United States—the largest producer of nuclear power. One could go on and on about the shortcomings.

### **SMRs Will Open Up the World**

With the advent of the SMRs—not only the NuScale version, but many other versions that can be developed within a short time by other nuclear power plant manufacturing nations—all of these countries can get an opening. What this will require, however, is for the SMRs to be mass produced in assembly-line fashion, and this will need governments—including most emphatically the governments of the nuclear-

producing nations—to get involved and ensure the job is done. The intention must be to enable the developing nations to build up their basic infrastructure and industrial capabilities. That should be attractive for even those private sector manufacturers who think in terms of developing markets for larger economic interactions.

How will these SMRs accomplish what the large nuclear power plants can not? Take for instance, Indonesia. The Indonesian archipelago has 18,000-plus islands. However, almost 60 percent of Indonesia's 260 million people live on the island of Java. Indonesian authorities' many efforts in the past to redistribute the population to various islands have fallen flat because of lack of electrical power, which provides the basis for sustainable living. For Indonesia, it is not possible to build a large nuclear power plant and string the wires across the seas to provide power to the islands. Nor is it feasible to have boatloads of coal crisscrossing the seas, carrying millions of tons of coal daily to feed the coal-fired power plants set up on those islands. For Indonesia, SMRs will offer a perfect solution.

The same can be said of so many countries in Africa. Look at Chad, Sudan, Mali or the Democratic Republic of the Congo. Developing the lands distant from major population centers will open up the countries and provide an opportunity for growth all across the continent.

These are important factors, and the correct and rapid development of the SMRs will not only put nuclear power at the helm of power generation for centuries, it will enable many of the developing nations to get out of the otherwise insurmountable poverty trap.

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## II. The Aesthetical Education of Man

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259TH BIRTHDAY OF SCHILLER

# The Deep Moral Crisis of the West: Why We Need a Renaissance of Classical Culture!

by Helga Zepp-LaRouche, Chair of the international Schiller Institutes

Nov. 10—It is typical of the short-sighted thinking of our time, that the Federation of German Industries (BDI) worries that there is a “systemic competition” between “our model of the open market economy and China’s state-controlled economy,” adding that while opportunities for commercial exchanges should indeed be taken, dependence on the Chinese market should be reduced.

Because of that same short-sighted thinking, even medium-term opportunities are being completely ignored. This obviously also has an effect on the human qualities of the future workforce, i.e., today’s children and adolescents. Viewed from this standpoint, the West is in a deep cultural crisis that is precisely the result of those “Western values” that supposedly make us so superior to other cultures.

### Western Society Is Disintegrating

The gunfight which left thirteen dead and many injured in a bar in Thousand Oaks, California, where Ian David Long, a veteran of the U.S. Marine Corps, ran amok, is just the latest example in an endless nightmare in the U.S., in which there is a new incident almost daily. In 2015 there were 209 mass shootings, 346 in 2017, and over 300 so far this year—now there are even people who have lived through, and barely escaped, two such horror situations.

The liberal media are quick to find alleged culprits: the National Rifle Association (NRA), and the Second Amendment to the U.S. Constitution, which stipulates the right to bear arms. But this explanation does not account for all the other forms of expression of this brutality, especially among increasingly younger children. One example is the case of a 15-year-old in Florida, who strangled his mother because he disliked her criticism of his grades, and then transported her body in a wheelbarrow to a van, drove her to a nearby church

where she was buried under a fire pit. Then, with the help of two friends, he staged a burglary and, in his own words, made a “Grammy-winning call to 911.”

These acts of brutality are not confined to the American side of the Atlantic. In Berlin, a ten-year-old was recently raped by another ten-year-old, who had announced it in advance, on a school trip. Two eleven-year-olds held the victim, while two uninvolved students looked on.

Of course, there have always been shocking cases of criminal behavior, but no one can deny that the unimpeded access for even young children to all forms of violence and pornography on the Internet, accompanied by the lack of an education that would develop their inner moral judgment, has led to a catastrophic increase of brutality.

The result is a completely degraded image of man, especially of women and of sexuality. A substantial proportion of future generations have a very negative prospect for their creative potential, considering the not insignificant phenomenon of excessive exposure to video games creating autistic-like social behavior.

The German Association for Education and Training (Verband Bildung und Erziehung, VBE) recently commissioned a survey by the Forsa Institute for Social Research and Statistical Analysis, on the views of parents and teachers regarding values education in Germany, “in view of the brutalization of manners, and current events such as in Chemnitz recently” (where, in August, a stabbing precipitated a far-right-linked riot and more violence). Over 90 percent of both the parents and teachers emphasized that values education was very important to them, but that implementation is lacking. Other surveys have shown that violence against teachers has reached a terrifying level. Teachers are increasingly being abused, threatened and attacked, and

surveys show that “the tone in society is becoming rougher, language has been brutalized, conflicts escalate more often and faster, [and] authorities are no longer recognized.” This is a “phenomenon of society as a whole” and by no means predominately among people with a migrant background.

Whether it is veterans who suffer from post-traumatic stress disorder from deployments in the Middle East (in the U.S., a veteran commits suicide every 65 minutes) or the virtual experience of video game violence or so-called entertainment—we see in both cases that the threshold to using violence, up to the killing of another human being, is being dangerously lowered. And although this trend has long been evident, in a society that attaches so much importance to its “liberal values” of “anything goes”—nothing has been done to stop the plunge into boundless decadence.

### **China, by Contrast**

In stark contrast, the Chinese government has recently banned hip-hop music and trivial quiz shows, because the songs’ lyrics conveyed a degrading image of women, and the quiz shows hindered the audience’s creativity. More important, President Xi Jinping recently emphasized in a letter to eight professors of the Central Academy of Fine Arts, the extraordinary importance of aesthetical education for the healthy growth of China’s youth, both physically and mentally. Aesthetical education, he wrote, plays a crucial role in the development of a more beautiful mind; it fills the students with love, and promotes the creation of great works of art.

In China, the importance of aesthetical education goes back to Confucius, but equally in modern history, eminent scholars and educators have devoted themselves to the use of this method with the goal of the moral ennoblement of students.

One of the founders of modern aesthetics, Wang Guowei, a scholar at the Qinghua Institute for Chinese Studies, dedicated himself to researching the causes of misery among the people, which he understood to stem from desire. Covetousness makes people unhappy; it drives them to want to have things, and this could lead to compulsive behavior, while the loss of the desired objects could lead to inner unhappiness and external social evil. Is there a way to defeat this covetousness? Yes, said Wang Guowei, and that is Beauty.

The former president of Beijing University, Cai Yuanpei, writing on May 10, 1919, had come to a similar view: “I believe that the root of our country’s problem lies in so many short-sighted people, who want quick

success or quick money without any higher moral thinking. The only remedy is aesthetical education.”

In the same philosophical tradition, Zhu Guangqian wrote in his book, *Aesthetics Explained*, that the problems of society stem from the fact that the hearts of most people are bad. To purify the hearts of men, one must cultivate the mind and the soul, and set higher and purer goals than the desire to get rich or have nice clothes or a high government position. To purify a person’s mind, you must first beautify their lives.

### **Aesthetical Education Heals**

The entire work of Friedrich Schiller was dedicated to this task: the ennoblement of man through aesthetical education. But above all, in his *Aesthetical Letters*, which he wrote in response to the total brutality of the French Revolution by the Jacobin terror, he was concerned with the question of where the ennoblement of man could come from, once governments become corrupt and the masses become brutalized. Great classical art is uniquely capable of achieving it, he said, because it possesses the infallible key to the highest stirrings of the human soul and can marshal the highest ideal of humanity. In his preface to his play, *The Bride of Messina*, Schiller stated that great classical art arouses in the human soul a power that remains in effect, even when the experience of the work of art has already come to an end.

If the West carries on with its culture of “anything goes,” then it is already clear who will win the “systemic competition” of which the BDI speaks, because China is doing a great deal to bring its 5,000-year-old culture to as many of its citizens as possible, and Xi Jinping personally advocates the spread of Confucian philosophy into all the pores of society.

We in the West certainly have a huge problem, because, since the paradigm shift brought about by the Congress for Cultural Freedom, the Frankfurt School, and the ’68ers, we have had several generations that consciously oppose the ideals of our classical humanist tradition. Nevertheless, it will only be possible to overcome the cultural and moral crisis when we return to the ideals of Nicholas of Cusa, Leibniz, Lessing, Schiller and Humboldt, and Bach and Beethoven—to name but a few—and convey their works, among other great works of classical art, to present and future generations.

You, dear reader, can find no better way to celebrate the 259th birthday of Friedrich Schiller than to join the Schiller Institute.

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### III. Gideon's Army

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FROM PARIS

## It's Now or Never for the New Silk Road!

by Helga Zepp-LaRouche

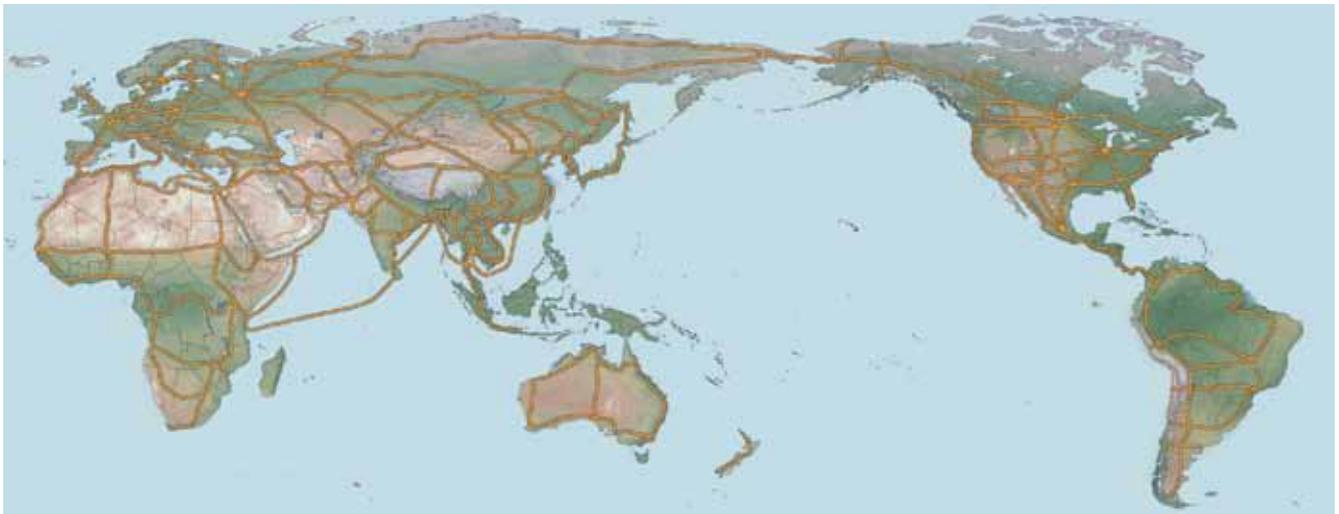
*Helga Zepp-LaRouche, the founder and President of the international Schiller Institutes, delivered this keynote in English to a Nov. 6, 2018 conference to announce the release of Les Nouvelles Routes de la soie, Pont terrestre mondial: Pour en finir avec la géopolitique, the French edition of The New Silk Road Becomes the World Land-Bridge, sponsored by the Schiller Institute in Paris, France. This is the edited transcript of her remarks. A [video](#) is available.*

Ladies and Gentlemen,

I want to say something a little bit provocative in the beginning, namely that this report, *The New Silk Road Becomes the World Land-Bridge*, actually offers solutions to almost all major problems on this planet. Now, by that I mean that it offers a solution to the dangers of a new financial crash; it offers the solution to the refugee crisis by proposing extensive development plans for Africa and also the reconstruction of Southwest

Asia. It is really a blueprint for the next economic platform for all of humanity.

This is not any longer just a plan. When my husband and I and our associates worked on the Eurasian Land-Bridge concept in 1991, this was our response to the collapse of the Soviet Union. We proposed the Eurasian Land-Bridge as a peace plan for the 21st century. And this would have been perfect, because it would have allowed the existing industrial capacities of the Comecon countries [Council for Mutual Economic Assistance, the East bloc] to be used to transform the Eurasian continent. It was a perfect, feasible idea, but at that time, strong geopolitical reasons caused it to be rejected. In France, François Mitterrand was opposed to German reunification; Madame Thatcher in Great Britain, and, George Bush, Sr., for geopolitical reasons, wanted to transform the superpower Soviet Union into a Russia reduced to just a raw materials-exporting, third world country.



EIRNS

*World map projecting the extent of the future World Land-Bridge.*



Delegates at the Asian-African Conference in Bandung, Indonesia, April 1955.

So, instead of adopting our plan, which was under consideration already then, they instead went for “shock therapy” and, from 1991-1994, dismantled the industrial capacities of Russia to only 30% of what it had been. What followed was the decade of the Yeltsin genocide, in which the Russian population was decimated by 1 million per year, due to that economic shock therapy.

But the Schiller Institute continued to organize conferences and seminars on five continents, and therefore, in 2013, when Xi Jinping announced in Kazakhstan the New Silk Road, we were extremely happy. Because now the idea had added power, namely the power of the second-largest economy in the world, soon, in all likelihood, to be the largest economic power.

### The Belt and Road Initiative

The Belt and Road Initiative, as it is generally called by China, in my view is *the most important* strategic initiative on the planet, because it is based on the idea of a win-win cooperation, not that one country has dominance, but that there is respect for the principles which come from the 1955 Bandung Conference of the Non-Aligned Movement: respect for sovereignty, respect for the social systems of other countries, mutual benefit, and non-interference in the internal political affairs of other countries.

The conception by Xi Jinping, to build a “shared community for the future of humanity,” is a conception

that is really based on the thinking of Nicholas of Cusa, who developed the concept of the “coincidence of opposites,” the idea that you can conceive of the One, the one humanity, and that that One is of a higher magnitude than the Many. And that you can overcome, actually, all conflicts, once you are capable of thinking in terms of the coincidence of opposites. It is a concept to overcome geopolitics, it is the idea that no longer must the world be separated into blocs, where one country or a group of countries is pursuing its interest at the expense of the other, against the other bloc; but that there is actually a possibil-

ity to have a concept which is benefitting everybody at the same time, to overcome the zero-sum thinking, to overcome the idea that one wins and the other must lose.

During the last five years, China has been pursuing this policy, and it has completely changed the world. It has changed the dynamic among countries. More than 110 nations and international organizations are already participating in it; it has completely changed the situation in the so-called “developing sector.”

The New Silk Road conception is the precondition for any economic development anywhere in the world, namely providing infrastructure. All this happened in just four years—in Africa, Latin America, Asian countries, even some European countries. And for four years, the Western states practically pretended this was not going on. There was almost no coverage in the mainstream media. You had the largest infrastructure



development program in the world capturing the imagination of so many countries—the New Silk Road Spirit catching on—and the West pretended it did not exist.

Then about one year ago, all or most of the think-tanks of Europe and the United States discovered all of a sudden an expanding New Silk Road, taking over the world, or so they thought, and they started to put out slanders, negative propaganda about what the real intentions were of the Chinese, by saying it's China's effort to replace the United States as the dominant power; it is neocolonialism; it is causing a "debt trap" for those countries that are receiving credit from China; China is trying to impose its "authoritarian model"

over the world; and the EU, all of a sudden, said, no, we want to have our own "connectivity" because we want to control the rules, and there was a rather heavy reaction against the New Silk Road, which continues to the present day, which is why most people in the West really have no good idea of what this New Silk Road is.

The New Silk Road is in fact undoing the damage done to the developing countries by 500 years of colonialism and 70 years of IMF conditionalities, preventing the developing countries from achieving the goals of the Non-Aligned Movement. Not only were there IMF conditionalities, the World Wildlife Fund was also trying to impose completely ludicrous environmentalist considerations for the most part, treating snails as more important than millions of human beings. And there was, naturally, the despicable philosophy of the Club of Rome, telling all that there are limits to growth, that the resources of the planet are limited, and that therefore there can only be "sustainable" development and "appropriate technology," a euphemism for no development. "Appropriate technology" means putting Africa and other continents in the condition they were in before the New Silk Road began.

### **BRICS, FOCAC, CIIIE**

Look at what happened at the BRICS annual summit in Johannesburg, South Africa, at the beginning of September. There, and also, a little bit later, at the FOCAC



Xinhua/Pang Xinglei

*Chinese President Xi Jinping (front center) and African leaders on their way to the opening ceremony of the Forum on China-Africa Cooperation summit, at the Great Hall of the People in Beijing, China, Sept. 3, 2018.*

summit, the big Forum on China-Africa Cooperation in Beijing, where all the heads of state and government of Africa said that it is not at all true that their countries are being put into a "debt trap"; to the contrary, China's New Silk Road projects are enabling these countries for the very first time to have industrial development, and that investment in this infrastructure is paying for itself, because it is generating the wealth that will make it very easy to pay back. On top of the fact that China has granted many of the loans and just forgiven some of them. So, the African leaders themselves said that this debt trap story is a complete lie.

China is proving that all the accusations are a complete lie, not least by the China International Import Expo (CIIE) underway in Shanghai, which is a gigantic event. There are 400,000 buyers and 3,600 companies from 172 countries. Xi Jinping's very powerful speech announced that China will import \$40 trillion worth of imports in goods and services over the next fifteen years and that the whole New Silk Road is not a solo performance but rather a chorus.

At the 19th Congress of the Communist Party of China (CPC) in October 2017, Xi Jinping announced China's goals: by 2020 China will eliminate all poverty within China; by 2025 China will be a world leader in ten advanced categories of technology; by 2035 China will be a modern socialist country with good living standards for all of its population; and by 2050 China

will be a democratic, harmonious, beautiful country. But this is a goal not only for China, but by 2050 all the countries of the world should be participating in this community of harmonious development.

The reason I said this perspective is not only the most important initiative, but also the only initiative on the planet, is that nobody else offers a perspective for a future cooperation of all of mankind as it is being promoted by China.

In his speech at the Import Expo in Shanghai, Xi Jinping also said something very important—that innova-

tion is the key driver of continuous economic developments, that innovation is the biggest driving force for the well-being of humanity, and that is the reason that China was able to have continuous growth rates in the beginning of 12% (now averaging somewhere close to 7%, 8%); and the reason China is not undergoing cyclical crises is that it has this continuous focus on innovation.

That is actually very close to what Lyndon LaRouche developed in terms of his economic policy, as expressed in the machine-tool principle—that the only source of wealth is the increase in the creativity of the labor force. This takes place through the discovery of new scientific principles and in the application of these principles to the production process. Those applied discoveries lead to an increase of productivity, an increase in living standards, an increase in longevity. The Chinese model is, therefore, actually successful, while the Western model of neo-liberal profit maximization for a small elite at the expense of the majority, leading to an increase of the gap between the rich and the poor, is a relatively unsuccessful model.

### American System & World Land-Bridge

As we elaborate in the Land-Bridge report, the Chinese model of economy and the American System of economy are actually much, much closer than most



*Mazeras Bridge of the Mombasa-Nairobi Standard Gauge Railway in Kenya.*

Xinhua/Chen Cheng

people think. Alexander Hamilton and Friedrich List both pursued this idea. List is the most famous Western economist in China. In his discussion of the American System versus the British system, List wrote that the British system is a free trade system in which so-called wealth is accumulated from “buying cheap and selling dear,” and controlling the trade in those goods. The American System of economy, on the other hand, rejects that idea. The true concept of wealth, as expounded and promoted by the American System, is the excellence of the labor force and the education of people. That is really what produces wealth.

There is one other element necessary to understanding what China is doing, and that is that I am absolutely convinced that the Chinese leadership is drawing from Confucius, and in particular, that the person of Xi Jinping, is deeply a Confucian philosopher. The Confucian tradition has the idea that every human being has the potential of becoming a *junzi*, a wise person, and that it is the aesthetical education which improves the character of the people.

In a recent exchange between Xi Jinping and eight professors from the Academy of Fine Arts, they asked him, “What is the importance of aesthetical education?” Xi Jinping answered that he puts the highest priority on aesthetical education, because the goal of education is a beautiful mind. Now, that is an idea which

used to be a Western idea when we still believed in humanist ideals and Classical art, but unfortunately the West has moved away from these ideals and a lot of the conflicts really come from that.

I want to identify two other major problems the World Land-Bridge approach can solve: As I said, the refugee crisis has demonstrated that there is no European unity, there is no European solidarity, and that Europe, up to now—with the exception I would say, of the Italian, the Spanish, and the Portuguese governments, and Greece—has been relatively unwilling to correct its policies regarding Africa. Xi Jinping has offered many times—not least, at the 2017 G-20 summit in Hamburg—that China wants to join hands for joint development projects in Africa. But only the Italian government—with the Memorandum of Understanding to build the Transaqua project—is on board.

Transaqua, an enormous project, will involve bringing about 3% of the water from the tributaries of the Congo River, through a system of inland canals, to Lake Chad. It's a gigantic project, one the Schiller Institute was instrumental in bringing about, through bringing together PowerChina, a large engineering firm, and Bonifica, the Italian engineering firm that developed this Transaqua concept. It will completely transform the heart of Africa by providing the 12 surrounding countries with hydropower, water for irrigation, and other core infrastructure for industrialization.

In this report, there is a whole section on the development of Africa: China has built railways from Djibouti to Addis Ababa and many other lines. All the European countries should be saying, "We agree with China," together with Russia, India, Japan, Indonesia, Turkey, and the other countries that have long since discovered that the African continent is the continent of the future. The approach from Europe should be to join in, saying "Let's go to Africa."

By the year 2050, Africa will have 2.5 billion people. Most will be young. And contrary to the Europeans who say, "Oh, refugees, poverty, immigrants . . .," the Chinese are saying, and Xi Jinping has said, that the



*Francesco La Camera, Director General of the Italian Environment Ministry (left) and Ambassador Mamman Nuhu, Executive Secretary of the Lake Chad Basin Commission, sign the protocol for an Italian grant of 1.5 million euros to finance a feasibility study for Transaqua.*

African continent is the continent with the biggest development potential; there will be a lot of young people, who if skilled, will make Africa "the new China with African characteristics." In other words, Africa can replicate the speed and the quality of the Chinese model. But naturally, it would require that the Europeans change their attitude and help to provide the kinds of infrastructure needed.

This is an ideal whose time has come, and one of our reasons for publishing this report, is to put this immediate development perspective on the table, not only in France, but also for all the French-speaking African countries. We will try to distribute this report in all of these countries in the widest possible form.

### **U.S. Trade Deficit Bugaboo**

One last point: The entire world right now is racked by the conflict between China and the United States in terms of the trade deficit. There are some people who are thinking in terms of the so-called "Thucydides Trap," in which a rising power threatens to surpass the dominant power—and that may lead to war. In history, there have been 16 cases where a rising power overtook the dominant power, and in twelve of those cases it led to large wars; and in four cases, the rising power just displaced the previously hegemonic power.

Now, obviously, it should be clear to everybody that in a time of thermonuclear weapons, should general war occur between the United States and Russia and China, there would be no human race left. Because it is the nature of nuclear war, that once it is

started, the entirety of all arsenals will be used, and that means, with a 99.9% probability, the annihilation of civilization.

The remarks of Lt. Gen. (ret.) Ben Hodges, the former commander of the U.S. Army in Europe, at a recent Warsaw Security Forum, where he said, “I think in 15 years—it’s not inevitable—but it is a very strong likelihood that we will be at war with China,” are not helpful.

There is another way.

President Trump is facing a very important vote today. When he came into office, he developed an excellent relationship with Xi Jinping, and there *is* the hope that he could go back to that, once the British-inspired coup against him is defeated, which could happen in the short term. There will be a summit between Xi Jinping and Trump, and maybe Putin, at the G-20 later this month. And there is a conception of how the U.S. trade deficit can be overcome, namely by large investments, joint investments between the United States and China in third countries, for example, in Latin America, in Asia, in Africa. And you could balance the trade deficit by simply making the cake much larger.

## A Uniquely Creative Species

I wish to end with one idea, and that is that the human species is the only creative species. At least, we haven’t discovered any such others in the two trillion galaxies found by the Hubble Space Telescope. Given that we are a creative species, we should be able to give ourselves a joint order to live together. What this World Land-Bridge proposes, is not to look at the *status quo* and then project from there, beginning with all the different problems we have in the world today, but to have a vision of the future: Think about how we should live together as a human species one hundred years from now, where hopefully we have thermonuclear fusion, which will provide energy and raw materials security for the entire species; where hopefully we will have industrialized the Moon; where we look at joint, international space travel and exploration as that which unites us as one humanity.

So, while it is clear that there will be shocks and difficulties to overcome, I think if we firmly have the vision in mind of the shared future of one humanity, all problems can be solved.

# The New Silk Road Becomes the World Land-Bridge

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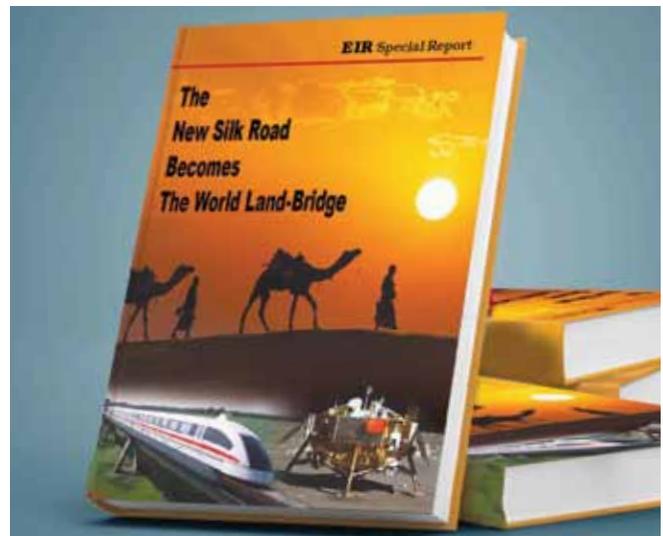
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# CIIE: China's Reform and Opening Up Enters a New Era

by Mike Billington

Nov. 11—From Nov. 5 to 10, the City of Shanghai hosted an estimated 400,000 businesses and buyers from every continent to the First Annual China International Import Expo (CIIE), marking a dramatic new phase in China's phenomenal development in the process of "Reform and Opening Up," launched exactly 40 years ago by Deng Xiaoping. In those 40 years, China has risen from a large but very poor nation to the second largest economy in the world, has lifted approximately 700 million of its citizens out of poverty, and, over the past five years, has launched the most dramatic international development project in human history, the Belt and Road Initiative (BRI).

President Xi Jinping announced China's decision to hold an annual CIIE in May 2017, with the first to be held in November 2018. In his opening speech on Nov. 5, Xi called the CIIE an "innovation in the history of global trade," and an "important decision made by China to pursue a new round of high-level opening-up." Under the theme of "New Era, Shared Future," he said that the Expo would "help friends from around the world to seize opportunities presented by China's development in the new era and offer a platform for us to deepen international business cooperation for shared prosperity and progress."

More than 170 countries set up pavilions at the Expo, with over 3,600 companies displaying their products and services.

It is indeed a new era for China. As Jack Ma, the co-founder and Chairman of Alibaba (one of the ten largest companies in the world), said at a forum on the side-



*The CIIE was held at the National Exhibition and Convention Center in Shanghai, the world's largest single block building and exhibition complex, with a total construction area of nearly 1.5 million square meters.*

lines of the CIIE:

I remember in 2001 when China joined the WTO, everybody [in China] was worried, saying the wolf was coming because the other people were manufacturing better and China would be in trouble. But ten years later, people think China is a wolf!

## China's Development Over 40 Years

China's development over these forty years depended initially on exports, utilizing its cheap and abundant labor to manufacture goods (often in foreign-owned companies within China) for export. But at the same time, tens of thousands of Chinese youth were going abroad for education, largely in science and technology fields, while China's work force acquired skills in the booming export industries. Over time, China's technological skills became competitive internation-

ally, and its extraordinary level of innovation has made China a world leader in such areas as high-speed rail, bridge and tunnel construction, nuclear and fusion technology, IT, and more.

China has now reached a stage at which its internal development allows a shift toward less dependence on exports, and a vast expansion of imports. On the opening day of the CIIE, *China Daily* called it a “milestone” in China’s impact on the world economy:

China now has more than 300 million middle class consumers, and the number will double in a decade or two, which will be twice that of the United States, and threefold that of the European Union. Last year, China contributed 30% of the world’s economic growth. That China increases imports to meet people’s demands and propel its continued development—it expects to import more than \$10 trillion worth of goods and services in the next five years—will benefit countries from around the world and help stoke the global economy.

Indeed, in his welcoming speech, President Xi said that “in the coming 15 years, China’s imports of goods and services are expected to exceed \$30 trillion and \$10 trillion respectively.”

One obvious implication of this reality is that the huge trade deficit of the United States with China, and that of many other developed nations, can be quite rapidly reduced or even eliminated, as China’s appetite for imports expands. President Trump is aware of that fact and has instructed his advisors to prepare proposals for a new trade deal with China, to be discussed when the two leaders renew their formal personal relationship at a summit planned in Argentina on Nov. 30, on the sidelines of the G-20 summit. This past week, China’s leading foreign policy official, Yang Jiechi, met with Secretary of State Mike Pompeo in Washington, after which Yang reported that they constructively discussed the trade issue. It is also reported that China’s leading eco-



Xinhua/Li Xin

*Food and Agricultural Products exhibition area at the CIIE, Shanghai.*

nomical official, Liu He, may be visiting the United States before the Trump-Xi summit.

### **International Responses**

President Xi, in his welcoming speech, said:

The CIIE is an event hosted by China with the support of the WTO and other international organizations as well as a large number of participating countries. *It is not China’s solo show, but rather a chorus involving countries from around the world. . . . Together, let us contribute to our common determined efforts to build a community with a shared future and usher in an even better tomorrow for mankind.*

Xi emphasized the role of the Belt and Road Initiative, whose intention, he said, is to “set up for the whole world a platform for open cooperation.”

Eighteen heads of state or government attended the CIIE and addressed the opening ceremony along with Xi. Twelve nations were “Guests of Honor”: Indonesia, Vietnam, and Pakistan from Asia; South Africa and Egypt from Africa; Russia, the UK, Hungary, and Germany from Europe; and Canada, Brazil and Mexico from the Americas.

Among the many words of optimism from the leaders attending the CIIE, Uruguay’s Foreign Minister

Rodolfo Nin Novoa said the event laid the groundwork for a “new international order” whose purpose is to “create a climate of international concordance among nations.” Dominican President Danilo Medina noted that it was a “superb venue,” not only to sell goods to China, but to learn “about the dozens of other countries present here, from five continents,” since China has become the reference point for “cooperation and connectivity among nations.” Charles Onunaiju, director of the Center for China Studies in Abuja, Nigeria, told Xinhua: “For Africa, there is no better opportunity to redress the so-called imbalance in global trade. China is not just offering investment, infrastructure, financial support, it is now offering market. The most important element in any meaningful development is the market.”

### **Innovation**

In his welcoming speech, President Xi also addressed the central role of scientific and technological progress as the driving force of peace and development:

It is important for all countries to pursue innovative growth and speed up the transformation of growth drivers. Innovation is the premier engine for development. Only with bold innovation and reform can we break the bottlenecks in global growth. The world economy has just emerged from the shadow of the international financial crisis, and recovery is still unstable. There is an urgent need for concerted efforts of countries in the world to promote scientific innovation and foster new growth drivers. The well-being of humanity is the biggest driving force for scientific innovation.

While the United States did not send any government representatives, the State of California sent a large delegation of officials and businesses. California has the largest volume of trade with China among all the U.S. states, with \$175 billion in 2017, which was 27.6 percent of the total U.S. trade with China. Kentucky’s Governor Matt Bevin also headed a delegation of businesses to the CIIE.

Nearly 180 American companies attended, making the United States third among participating companies. These included many Fortune 500 companies, such as Qualcomm, General Electric, Johnson & Johnson, GM, Microsoft and DuPont.

U.S. participation in the booming Chinese econ-

omy, and especially in the Belt and Road Initiative, is the most constructive means to resolve its huge trade deficit with China, and to renew the close relationship between Presidents Trump and Xi. Schiller Institute President Helga Zepp-LaRouche, known in China as the “Silk Road Lady” for her role, with her husband Lyndon LaRouche, in formulating the concept in the 1990s, said in her Nov. 8 international webcast:

President Xi Jinping gave an excellent speech [at the CIIE], and while he’s a Chinese leader, and he speaks with Chinese characteristics, if you look at the substance, it should remind you of my husband’s approach, that the only source of wealth is the creativity of human beings, which leads to scientific and technological progress, and is then applied in the production process—leading to an increase in productivity, better living standards, and greater longevity.

### **The Potential Is Great**

The potential is great. President Xi described the steps that have already been taken, and those being prepared, for this new stage of “Reform and Opening Up.” These include shortening the “negative list” (sectors of the economy restricted to Chinese ownership), investment liberalization, further opening of the financial and service sectors, raising the foreign equity caps, and more. While these measures were set in motion before the escalation of the trade crisis with the United States, they nonetheless set the agenda for the Trump-Xi Summit at the end of the month.

Xi’s description of China itself in his welcoming [speech](#) is an apt conclusion to this report:

China is the world’s second largest economy. We have a market of more than 1.3 billion consumers who live on the land of over 9.6 million square kilometers. To use a metaphor, the Chinese economy is not a pond, but an ocean. The ocean may have its calm days, but big winds and storms are only to be expected. Without them, the ocean wouldn’t be what it is. Big winds and storms may upset a pond, but never an ocean. Having experienced numerous winds and storms, the ocean will still be there! It is the same for China. After going through 5,000 years of trials and tribulations, China is still here! Looking ahead, China will always be here to stay!

# Use Trump's Victory in Midterm Elections To Build Momentum for the New Paradigm

*This is the edited transcript of the international Schiller Institute's New Paradigm webcast with the founder and President of the Schiller Institutes, Helga Zepp-LaRouche, for November 8, 2018. She is interviewed by Harley Schlanger. A [video](#) of the webcast is available.*



EIRNS/Eli Santiago

*LaRouche PAC street organizing in New York City, Oct. 2, 2018.*

**Harley Schlanger:** Hello. I'm Harley Schlanger with the Schiller Institute. Welcome to this week's international webcast, featuring our founder and President Helga Zepp-LaRouche.

It's Nov. 8, 2018, two days after the long-awaited midterm elections in the United States. And I think it's fair to say that what many—including the Democrats and the media—had projected as a “blue tsunami,” a massive Democratic predominance, turned out to be far less than that. In fact, this looks to be a victory for the forces organized by Donald Trump, and not coincidentally, also for what we were doing.

Helga, why don't we start there: What's your assessment of the results from the midterm elections in the United States?

## Assessment of Midterm Elections

**Helga Zepp-LaRouche:** I don't think it's a victory for the Democrats at all. It is quite usual that in the midterm elections, the sitting President gets sort of one black eye, because people are always discontented about something. That happened, by the way, to Obama

as well. Throughout the campaign, Trump's jetting from one rally to the next resulted in increasing the number seats in the Senate held by Republicans. That is actually quite unusual and I would say fully a success for Trump, personally.

I think it's very, very important, because this changes the situation inside the United States dramatically, and it has obviously potential for the strategic situation. Just to comment on that: The pro-Trump Republicans generally won; the anti-Trump Republicans in the House generally lost. I think in two cases, Trump was able to achieve victory for a Republican Senate seat in places where Obama also campaigned very heavily for the Democrats, so basically Trump won out against Obama, and this is really creating a very interesting situation.

One of the most important results, obviously, is that with such a firm Republican majority in the Senate, it's

almost impossible that the Democrats will pursue their intention to impeach Trump, because they would have no chance to get it through the Senate. Then, a reflection of that, is also the invited resignation of [Attorney General Jeff] Sessions, and that now, for the next 200 days, [Sessions' Chief of Staff] Matthew Whitaker is the Acting Attorney General. In that capacity, he is supervising, or on top of the Mueller investigation. One of the reasons Senator Chuck Schumer and other Democrats were completely hysterical, is that Whitaker is on record saying that Mueller overstepped his territory with a fishing operation into the financial records of Trump and his family; that this had absolutely nothing to do with the investigation into the 2016 election.

So I think that is very interesting. However, obviously, the investigation into the British coup must continue. It would be extremely important—and there should be a public discussion about this—that Trump should go ahead and declassify all the documents having to do with Christopher Steele, with the collusion of the Obama Administration with the British intelligence services. All must come out. Because that is something which absolutely has to be gotten out of the way, to free Trump to do what he has to do with respect to Russia and to China.

In his post-election press conference on Nov. 7, Trump signalled that he is hoping for a bipartisan collaboration with Nancy Pelosi and the Democrats to work on legislation, thus putting the Democratic Party into a situation where either they start to take care of the “forgotten men and women” in the tradition of Franklin D. Roosevelt, or, if they continue with their identity politics, going for the impeachment—which as I just said, is now almost impossible—that could very well lead to a split in the Democratic Party.



U.S. Dept. of Justice  
*Matthew Whitaker, acting U.S. Attorney General.*

What is needed, and very, very urgently, is that the necessary economic program be installed, which has been lacking to a very large extent from the debates during the campaign, except for what Kesha Rogers, Ron Wiczorek and a few others did. Beginning now we need a full-fledged mobilization on Glass-Steagall, the Four Laws of LaRouche, and a New Bretton Woods system. The LaRouche PAC organization, the national campaign of Kesha Rogers and the Campaign To Win the Future, did impact to a very large extent, large segments of the U.S. population, especially those voting for Trump. So there is a very, very good precondition to escalate that now, and really bring in the necessary economic solutions, especially Glass-Steagall and infrastructure, but actually the whole Four Laws of LaRouche and a New Bretton Woods new credit system to address the urgent issues internationally.

But the outcome of the elections is not a bad result at all. I think this gives us a tremendous opportunity to move on and actually go towards the solution the United States and the world urgently need.

**Schlanger:** Just to underscore what you’re saying, the mainstream media had been talking about a “blue wave” creating the basis for an impeachment. And instead, we saw a lot of strength in Trump’s initiatives, his campaigning—9 of the 11 Senators he campaigned for won, including 4 who defeated Democratic incumbents; and only 1 Republican incumbent who had not been a very strong supporter of Trump, lost, and that’s Senator Dean Heller from Nevada. Second, you mentioned Clinton and Obama: It looks like the Republicans are going to lose something like 30 seats in the House. In 1994, Bill Clinton lost 54 House seats and 8 Senate seats, and



Gage Skidmore  
*Rep. Nancy Pelosi.*

in 2010, Obama lost 63 House seats and 6 Senate seats.

So this goes against the historic trend, and I think that is the result of Trump emphasizing a couple of key points, and one of them that we've discussed, is the post-election diplomatic offensive. At all of the rallies he kept talking about becoming friends with Russia and China.

Helga, I'd like your assessment: We have a couple of meetings, and then summits, coming up. They offer an opportunity for a discussion to go beyond merely ending the dangers of war, to actually introducing the economic policies, the New Bretton Woods.

### Opportunities in Upcoming Summits

**Zepp-LaRouche:** Absolutely. The first such occasion will be in Paris three days from now, on the occasion of the centenary of the Armistice ending the First World War, which will be celebrated in a series of huge meetings and conferences in Paris. Originally, there was a plan to have the first summit between Trump and Putin [since Helsinki], but because French President Emmanuel Macron wants to have the centenary events as such not overshadowed by such a huge summit between Trump and Putin, they will only have a working lunch. According to Russian Foreign Minister Sergey Lavrov, important questions will be raised there.

But I think the real opportunity to completely change the agenda and really solve the war danger, solve the danger of a financial crash and go for a completely new kind of paradigm, will be on the sidelines of the G-20 summit, Nov. 30 to Dec. 1 in Buenos Aires, where there is scheduled summits between Trump and Xi Jinping, and Trump and Putin.

This is very important, because despite the fact that you have a complete escalation against China by the think tanks, accompanied by all kinds of completely wrong accusations, there is hope that the discussions between the United States and China are moving back into an orientation to solve the trade war through better means.

Over the next three weeks, during preparations for these important summits, we should have from the Schiller Institute and all organizations we are working with internationally, a full mobilization to make sure that that important opportunity is used to address all the



EIRNS/Art Murphy

*Kesha Rogers, campaigning for America's future at the Bayland Community Center in Houston, Texas, Oct. 28, 2018.*

important issues: Like the danger of a financial crash, the various urgent development perspectives for Central and South America, for Africa, for the reconstruction of Southwest Asia. It is my view that now that Trump has his back free, so to speak, he can really go in the direction of a new diplomacy with Russia and China, which he emphasized many times during his rallies.

If these three leaders—Trump, Putin, and Xi—would address the world problem, and not just talk about bilateral tensions between the United States and Russia and the United States and China, but really move to a new paradigm and go for a development perspective so that all parts of the world can actually have a good future—what Xi Jinping always calls “the shared destiny for the future of humanity”—this would really change everything. Then we would be looking at mankind not from the present status quo of geopolitical tensions, but thinking in terms of humanity from the standpoint of where do we want to go and where must mankind be 100 years from now.

This could be a period in which, if things go the right way, we will have a breakthrough in thermonuclear fusion, being able to use it commercially, and therefore having energy and raw materials security. Through the fusion torch method, all “waste” can be separated into isotopes, creating new raw materials. By that time, we will already have the first step in the direction of villages on the Moon, international cooperation in space, and humanity just growing up and becoming an adult species, based on mankind's nature as a creative species.

Now, should that spirit of a joint future inspire these three presidents, they will have backing from the

whole world, because all the nations of the world need these three leaders to cooperate and provide a vision. A vision to outflank the opposition in each country—the neo-con faction in the United States; the anti-American faction in Russia, which I think does exist; even hardliners in China—and move the whole world into a completely new paradigm.

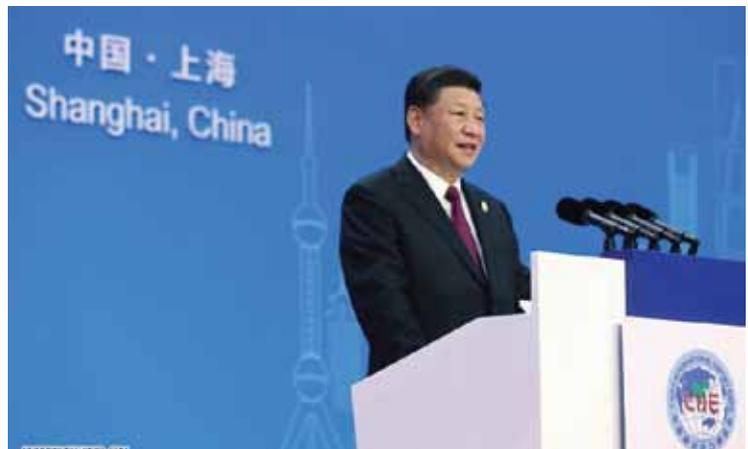
I call upon all of you, our listeners and viewers, to help us in this mobilization. Because this is a period in which we need cooperation among the large powers, especially the Four Powers of the United States, Russia, China and India, with other countries joining them, to implement a New Bretton Woods system and to move away from the monetarist system to a credit system, and thereby usher in international cooperation based on a win-win cooperation of everybody.

This is not a utopian goal at all, but the absolutely necessary next step of humanity if we are to avoid a catastrophe. The potential for such a catastrophe was diminished because of this election result, but the danger is by far not over, and therefore, I really appeal to you: Join the Schiller Institute, become a member, help us in this mobilization to move humanity into a new paradigm. That should really be our main focus for the next three weeks going into these summits.

### The China International Import Expo

**Schlanger:** I think we see the potential of that mobilization in this extraordinary China International Import Expo conference underway in Shanghai, where the Chinese government is hosting large numbers of people from all over the world—businesses, business leaders, corporate leaders, and heads of state. The reports we're getting show that this is, as you said, a milestone. What is the outcome you expect from this conference?

**Zepp-LaRouche:** First of all, President Xi Jinping gave a really excellent opening speech. While he's a Chinese leader, and he speaks with Chinese characteristics, if you look at the substance, it should remind you of my husband's approach, that the only source of wealth is the creativity of the human being leading to scientific and technological progress, which then is applied in the production process, leading to an increase in productivity, better living standards, and greater longevity. Xi Jinping emphasized the continuous need for



Xinhua/Xie Huanchi

*Chinese President Xi Jinping keynotes the opening of the first China International Import Expo, Nov. 5, 2018.*

innovation to address all the problems of humanity, as the biggest driver, that innovation is absolutely the most important for the well-being of humanity as a continuous process.

I urge those of you who normally don't read these things in the Western media, go to the China International Import Expo website and actually look at the [speech](#) yourself and read it, because you will see that this is absolutely coherent in spirit with the New Silk Road Spirit, and people in the West just don't know it.

Now, this November 5-10 conference was remarkable. There were 400,000 buyers; 3,600 firms exhibiting there. There were 128 countries represented, 18 heads of state, most of whom had state visits in the adjoining days. China's announcement that they want to import \$40 trillion worth of goods and services in the next fifteen years is really also remarkable. There were some articles commenting on this affair, saying that China responded to an atmosphere of sanctions and trade war, exactly in a different direction, namely, opening up more, opening up the Chinese markets more for imports.

And I think this is really very good, because if you want to overcome the trade deficit between the United States and China, from the standpoint of economics—clearly the two most important countries on the planet—one way is to go into a trade war, which I think everyone should realize will really hurt the American consumer and the American firms, and it's not a viable way to solve the problem of the deficit.

On the other hand, if China continues to open its internal markets, then because China already has a middle class of 300 million well-to-do families, with

the expectation that that will double in the next 10 years (twice the number of middle-class consumers in the U.S., and three times that of the EU), you can see that such an opening is a great opportunity for the U.S. to increase its exports to China, as China increases its imports from the U.S.

There also arises the basis for joint ventures in third countries, which would require the cooperation between the United States, European nations, and other Asian nations to develop and invest in Latin America, in other Asian countries and in Africa, and that way, bring the benefits to every corner of the world.

This Expo really shows that China is absolutely serious about creating a win-win platform for cooperation among all countries.

So I think this was a remarkable thing, and it's a very good sign of what could happen in the summit between Xi Jinping and Trump on the sidelines of the G-20, because the opportunity to solve a trade deficit by making a new deal incorporating all of what I just said, is really very, very clearly there. And the fact that Yang Jiechi [director of the Office of Foreign Affairs of the Communist Party of China and a Politburo member] was just in the United States, and that the trade discussions have resumed, I think this is a hopeful sign.

I'm modestly optimistic that now, with the new strength Trump gained in these midterm elections, that the road ahead can lead to quite good results. I'm carefully optimistic, but since we are not watching this passively, standing on the sidelines, I urge all of you to help us to get our agenda on the table.

### Armistice Day Reflections

**Schlanger:** Helga, you keep emphasizing, as Xi Jinping does, the importance of mutual benefit. You can



DoD/D. Myles Cullen

Marine Gen. Joseph Dunford, Chairman of the Joint Chiefs of Staff: "It's not a new Cold War; it's just that the U.S. and Russia are competitors."

look at this other event that's occurring in a couple of days, and see what happens when there's no strategy for mutual benefit, only a geopolitical strategy of competition, struggle for markets, control over markets and so on, which was the march toward World War I as a result of British geopolitics. I know you've thought a lot about the importance of using this event in Paris, to prevent us from sleepwalking into war once again. I'd like you to give us your thoughts on that.



NATO

U.S. Marines deploy to the massive Exercise Trident Juncture, a provocation of Russia.

### Zepp-LaRouche: Yes.

It's really a very important moment to reflect on, the launching of World War I, and because the Versailles Treaty was not a platform from which peace could develop, Europe immediately marched into World War II. We must move away from the present, dangerous leftovers of this whole situation.

The 1914 assassination of Archduke Franz Ferdinand of Austria in Sarajevo was just a trigger. All the preparations, pitting one country against another, and

all of them pitted against Germany, was the ready chessboard. And his assassination was just one of a number of possible incidents, any of which could have triggered the same kind of war. I think we should learn the lesson from that, because we have not yet moved away from today's war-danger chessboard. I am talking about the potential of Trump, Putin, and Xi Jinping defining a new paradigm.

But if you look at the actual situation—first of all, this big NATO maneuver, Trident Juncture, which ended only yesterday. But it was a clear provocation, and General Joseph Dunford, the Chairman of the Joint Chiefs of Staff, basically said, "Oh, no, we are not in a new Cold War, it's just that the United States and Russia are competitors."

But there is a clear difference. I don't know what all the Western military are thinking, but I can assure you, and I think I mentioned it last week, that people in Russia and China, and also in some reasonable places in Europe, are looking at this quite differently. NATO has expanded to the Russian border, the U.S. antiballistic missile system has been installed already in Romania and is being built in Poland, something which Russia has responded to, by developing new weapons based on new physical principles. I mean, this whole situation is very far from being stable. And there were some incidents, involving Russians and Americans in the context of these maneuvers. Some retired military said these kinds of exercises are completely useless; they are provocative and they don't contribute to stability.

I think we should use the anniversary of the end of World War I to seriously reflect on how such an atrocity could happen, so that we really understand that in a time of thermonuclear weapons, we must absolutely move to different relations among nations and not view the other as a geopolitical opponent and the excuse for obscenely enormous military budgets, which really are a complete waste!

We have said many times that you can easily retool all of these military industries to produce useful things. If the United States would move to retool its military industries to build fast train systems, new infrastructure, go into a crash program for thermonuclear fusion, and cooperate with other nations in space research and travel, we could actually use all of these things and everyone could even remain wealthy; nobody is proposing to take the profit away from people who are now stuck in military production. But we could really move all of these productive capacities into a useful situation: The United States *urgently* needs infrastructure. The United States *urgently* needs a fast train system connecting all its major cities, and naturally also the subways and the roads, electricity production and distribution, communications—there's so much to do.



ITER  
*Thirty-five nations are collaborating to build and operate the ITER Tokamak, the world's largest fusion experiment. Here, a high-power laser welding system developed in China is used to seal the structural case of one of many ITER correction coils.*

I know that this is going completely against current thinking, but if the United States would really start to think along these lines, it could have a completely different economic policy coming from a New Bretton Woods, cooperating in these large projects. It may sound like a completely far-off idea, but why should we use all our resources eternally for military production which from the standpoint of physical economy is really a waste? Maybe some military research and development does indirectly lead to new technologies, but these new technologies could be had directly, making them much more beneficial for the advancement of civilization.

I know that this sounds very much against the *Zeitgeist* [the thinking of the times], but I think the United States would be much better off if it would develop its domestic economy, or, as Trump himself has said many times, "Make America Great Again," by building up modern, new civilian technologies. That urgently needs discussion. LaRouche's Four Laws provides the context.

### The Reaction in Europe

**Schlanger:** Helga, I'd like to know what you think the implications are for Europe of Trump's victory in the midterm elections. We're seeing almost every day a

new political shock in Germany with the Brussels bureaucrats. There is the economic crisis, as revealed in the latest round of bank stress tests. Germany seems to be adrift at a point when the rest of the world is moving very deliberately toward this new paradigm. What are the implications of Trump's success? Is this going to have an impact in Europe?

**Zepp-LaRouche:** Even the German First TV channel, which, according to some surveys in recent years, reports negatively about Trump 98% of the time, had a pretty objective commentary saying the "blue wave" did not take place or was very tiny, so Trump is now much strengthened. Blogs and news programs are saying that Trump will go to the Paris summit much, much stronger than German Chancellor Merkel and French President Macron, which is true.

There is, however, a complete absence of any kind of new paradigm in the thinking of the German and French governments. Macron came out for the idea of building a European army, separate from NATO, which I think is really a lousy idea. Fortunately, the popularity of Macron is in free fall, so I don't think that idea will go very far. The idea of a European army at this point, really reflects the same old geopolitical thinking of the EU, which it had already when it supported the plundering of Russia in the 1990s during Yeltsin's Presidency. This is also the present view of the EU, in blocking the expansion of the Eurasian rail link from Russia to Slovakia to Vienna. The Russians and the Austrians were agreed that the link would conform to Russia's broad gauge rail specification; however, the EU is insisting that the extension be constructed at standard gauge. So it really is a wrong, geopolitical view.

Yasuo Fukuda, the former Prime Minister of Japan, is presently in China preparing the state visit of Prime Minister Shinzo Abe. He made a very, very interesting speech, in which he said that some years ago the Japanese economy was number two [inaudible] we need in Europe. And if the United States and Russia and China can hopefully move together, then hopefully we [Japan and China] can [also] move together, then hopefully we can get the European countries to also change their views.



*LaRouche PAC organizing in New York City, Oct. 2, 2018.*

EIRNS/Sylvia Spaniolo

Now, that obviously will not involve Merkel, as she's on her way out. So far, none of her proposed replacements has said anything in the direction of what I'm just saying. That is why the Schiller Institute is so absolutely necessary: So, again, join the Schiller Institute and help us, give us your support in any way you can. Because what we are proposing is actually a vision of where mankind should be, and that is urgently, urgently required.

I think the hysteria over Trump is probably phasing out, because people realize he may be here to stay, and not only for the second part of his first term. A lot of Bush Republicans are now out of the Republican Party, and so if Trump can do domestically what is necessary for the economy, he has also a very good chance to have a second term.

So, it's really the time to change. I think we have an incredible historic opportunity, but we need you, and we need a big activation of everybody who has good intentions for civilization. So join us!

**Schlanger:** And as Helga emphasized, join us *now*, because the next three weeks will be crucial in not letting this moment slip away, but building on what happened in the elections on Tuesday.

So, with that Helga, we'll see you next week. Thank you very much.

**Zepp-LaRouche:** Yes, I hope so.

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## IV. A Fundamental Question of Science

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Tuesday, May 29, 2012

# A Lesson from Wilhelm Furtwängler: The World's Breakdown-Crisis Is Now

by Lyndon H. LaRouche, Jr.

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**(BREAKING NEWS:)** In the midst of my writing of this report, on Friday evening, May 25, 2012, the long-simmering general financial breakdown-crisis of the trans-Atlantic world (and also beyond) has now struck. In the United States itself, as elsewhere, this means that either the original Glass-Steagall law is now reinstalled, virtually immediately, or a world crisis virtually beyond belief is breaking out, probably, by Tuesday morning or soon thereafter, unless the intention to re-install the original Glass-Steagall law is installed, and that virtually immediately. Either way, the world as we have known it, is about to undergo a sudden and tremendous change.

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### Foreword: (A Study In The Principles of Ontology)

*The systemic error inherent in the formerly accustom- ed, but nevertheless errant view of mankind's powers of sense-perception, has been an effect which had been rooted in the quality of the following set of presumptions: **First:** the presumption, that the foundation of human experience is to be located primarily in what is presumed, mistakenly, to be the act of simply presumable, "virtually self-evident" sense-perception of objects of, implicitly, particular "matter;" and, **Second:** the presumption that that, consequently, should be taken to be a standpoint from which we are to do the following:*

*1.) To derive knowledge respecting the existence of living processes, erroneously, from what is dead, as from what is typical of the standpoint of the late Ber-*

*trand Russell's guidance to his dupe, the silly Alexander I. Oparin;*

*and*

*2.) To that same effect as that of Oparin's error, we have the earlier case of Rudolf Clausius. Clausius's error is a case from which persons have derived the errant notion of the existence of the species of human life-forms as being consistent with existences of life-forms which are not human life-forms. The case of the type of systemic failure of judgment by Clausius, as of others, is derived from the ontological error of attributing the quality of the lower forms of life to the quality of existence of the different characteristics of that which is presumed to become sensed, as if that were what is to be considered to be the quality attributed to the act of sensing the object *per se*, animal life, as if human and animal life were simply inter-changeable. Such is a common ontological error of mathematicians and others, including the relatively worst case of the economists of the virtual "flat Earth" dogma of the "Chicago school."*

*It must be emphasized, in sharp contrast to the customary practices of the reductionists of all varieties, that the work of the celebrated musical composer and director Wilhelm Furtwängler, had correctly demonstrated the need for a view which is directly opposite to that of the cases of known "stop-watch" conductors on the podiums of concerts, or comparable reductionists:*

*3.) respecting both life as such in general, ordinarily,*

*and, also, for example:*

*4.) the higher expression of specifically human life, which is located in the noëtic powers specific to the*



*“There is a crucial intersection,” writes LaRouche, “between my methods of forecasting and the results secured by Furtwängler’s discovery of musical principle.” Shown: Wilhelm Furtwängler (1886-1954) conducting.*

*human mind. These are powers which do not lie within the presumed bounds of what have been identified as the simply “mere senses.”*

*The same set of those four points just listed above, is appropriately restated as a principle, as follows:*

*That those creative (i.e., noëtic) powers which are presently known to us as being specific to the powers of the human mind, are distinct, as Wolfgang Köhler had indicated specifically, in his opposition to what had been the reductionist’s customary, failed notion of the human brain. Those noëtic powers which our reductionists<sup>1</sup> deny, were, thus, to be rejected by the errant, but are to be considered as typical reflections of the highest ranking authority for human knowledge, if and when they are being expressed as being presently known as our experience of “the universe.”*

*What I have just proposed here, thus requires the additional, principled recognition, that there is a relationship between (a) the powers specific to the experience of the human mind, as distinct from the common presumption of the ordinary notion of the brain as such, and (b) the notion of the concept of a universal “Creator.”*

*To restate that same argument: we must rely upon*

*mankind’s expressed powers to create new states of “matter” within a universe as it is presently known to us. This works to such effect, that we are enabled to identify the efficient existence of **a universal principle of creativity, in its effect**, as being a characteristic of our universe, in some way, and some form.*

*Among the most relevant features of this kind of experience, is the evidence that the evolution of life-forms, as within the terms of the evolution among the totality of those living species presently known to us, presents us with an “upward” ordering (i.e., anti-entropic) in the general, net evolution of living species, past and present: this is an ordering which is specifically, and universally anti-entropic in its characteristics as a process.<sup>2</sup> Customarily, this clearly pertains to our present knowledge of life-forms on Earth; but, the argument for both our Solar system, and which is also relevant for the case of our galaxy, is a strongly defined implication. What are called “human (over-) population crises” are not a product of the nature of man, but of the “unnatural” disease of oligarchism, a disease whose effect is an imposition of stupidity on what are often denounced as those “lower classes of society” which are nothing as*

1. The followers of the decadents Ernst Mach and Bertrand Russell, for example.

2. There never was actually proven evidence supporting that hoax of “a second law of thermodynamics” uttered by Rudolf Clausius.

much as they are the victims of the impositions of submission to be ruled by oligarchism.

For example: With respect to matters bearing on the existence of our galaxy, the periodicities of development within the range of our galaxy, are also to be considered as powerful evidence of a coherence in this just-indicated degree, as this is already located within the observed record of the periodicities of the processes of the galaxy itself. Such is the experience of a knowledgeable ordering extended within the extent of our galaxy, and reaching beyond.



### On the Subject of the Principle of Music

The foregoing, stated conclusion begs the inference of a certain specific kind of universality, that of a truly universal, and knowledgeable principle of creativity. The empirical evidence to this effect, for music, is provided to us as by the work of Wilhelm Furtwängler; and by that work's relevance to the preceding genius of Johann Sebastian Bach's C=256. This has had universalizing implications for the defining of the principled characteristics of the human mind. Indeed, the rises and declines of the Classical musical principles so defined, correspond, in experience, to the ebb and flow of the moral quality of the intellectual competence of the relevant cultural current among sections of human society.

This is reflected in the function of metaphor; when metaphor is also recognized as invoking the universal physical principle of Johannes Kepler's use of the notion of "vicarious hypothesis," otherwise known to us as the notion of "metaphor."

### Consider a Related Case

I have referred attention, above, to that experimental evidence which works to the effect, that the successfully continued existence of the human species, has depended upon the function of a trend of increase in the relative energy-flux density expressed as a correlative of the role of "fire," or its equivalents, if and when such density is expressed in the evolution of the capabilities of the human species to relatively higher

*"The history of leading physical-scientific practice since the crucially important contributions of Max Planck and Albert Einstein, begs, more and more, that we consider the fundamental problems of scientific practice by considering the universe as if 'from the top-down approach': from the galaxy as a system...."*  
Shown, Planck and Einstein, Berlin, June 1929.

levels of cultural development. In a related way, the potential ability of the human species to maintain human life on Earth, is correlated with the qualities of society's intellectual (i.e., noëtic) progress toward some effect of higher levels of energy-flux density, or, its equivalent, as from simple use of fire, into (or, beyond) the known range of subjects of "matter/anti-matter" actions.

The "force" of that just-stated argument, was corroborated, within the scope of the contributions by such leading intellects as Max Planck and Albert Einstein. This was shown in a conclusive fashion, by the evidence that neither space-in-itself, nor time-in-itself, qualify as simply self-evident properties of what a faulty, but persisting popular convention still wishes to employ to define the existence of a known physical space-time per se.

The trend into decadence is exemplified by the cases of certain notable adversaries of Max Planck, as in the case of such as the assaults on science by reductionists such as the Austrian Ernst Mach,<sup>3</sup> and, also, by both the

3. As in Berlin during "World War I," as reported by Albert Einstein then. Mach's influence was then superseded by the campaigns wrought by the evil Bertrand Russell during the Solvay Conferences of the 1920s.

utterly debased Bertrand Russell, and Russell's own products, such as the British-created Russian puppet-figure Alexander I. Oparin. Oparin's case typifies the implicitly lying influences, such as the oligarchism which Bertrand Russell induced in his pathetic dupe, Alexander Oparin, an oligarchical outlook which has tended to wreck scientific progress, that out of motives of hatred against competent science by such as Bertrand Russell and his lackeys.

### **The Fraud of Euclid in Particular**

That much said, we must emphasize included attention to highly relevant, other, earlier avenues of pathological thinking, such as the mental illness represented by what is often identified, as by me and others, as the Aristotelean cult of Euclid, which continues to play a significantly destructive role in the mental life of what often seems, mistakenly, to pass for "science." The pathological trend inhering in Euclid's system, was exposed, and condemned publicly by that friend of the Christian Apostle Peter, who was sometimes known as "Philo of Alexandria." This also has a significance in science, for reason of that fraud of Euclid's role as a morally degrading factor of distraction from a competent scientific method. Those ironies of the fraud of Euclid (notably, since the death of Eratosthenes) are of exemplary, historical-clinical interest for us here, on that account.

According to Philo, the still-chronic, relevant thesis of Euclid worked to the effect of asserting that the existence of mankind could not have existed until the Creator of the universe were already dead: that same thesis of "God is dead," is associated with the radically reductionist, modern figure of Friedrich Nietzsche and consistent fascists (as also worshipers of the "tradition" of the Olympian Zeus) generally. Those chronic errors are derivatives of the so-called "oligarchical principle."

Life is, after all, as the referenced work of Wilhelm Furtwängler attests, the essence of creativity, and of true love of the universal passion of creativity as such!

The systemic fallacy permeating that reductionist's fallacy which I have addressed in the preceding paragraphs, is the fruit of a reductionist fallacy rooted in the elementary error, such as that both Bertrand Russell and A.I. Oparin represented by the substitution of an ill-conceived notion of sense-perception *per se*, for the ontological "content" of what is presumed have to

been the common expression of the "living" and the "dead" alike.

### **The Reductionist Hoaxes Generally**

That much said in the introduction of the report this far:

*Before we proceed further, we must emphasize the troublesome special role of those social systems which are, categorically forces expressed as mankind's willful habits of social self-destruction of our species, habits which are specific to those oligarchical social systems which are products of cancer-like disorders of societies such as what are identified, more or less interchangeably, by the categories of "monetarism" or "oligarchism."*

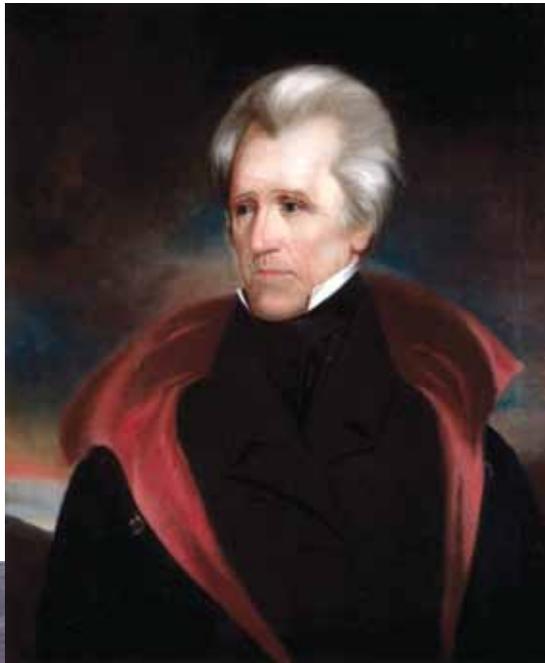
Such epidemic expressions of social-mental diseases, have been customary for many human cultures thus far. They are issues of a type which has been typified by, but not limited to oligarchical systems such as the case of the modern, approximately "world wide," nominally "British" imperial monarchy, the monarchy that has been the imperial system which was spawned by "The New Venetian" empire, and carried, like a kind of epidemic, into the British Isles, by that incarnation of a vicious disease known as William of Orange.

Such expressions are properly identified as a wicked scheme cooked up as the typical "social expression" of "childhood cultural diseases" of entire human social systems, and must be recognized as, and treated as social diseases which are either simply chronic, "wasting diseases," of some infectious cultures, or a characteristically fatal one.

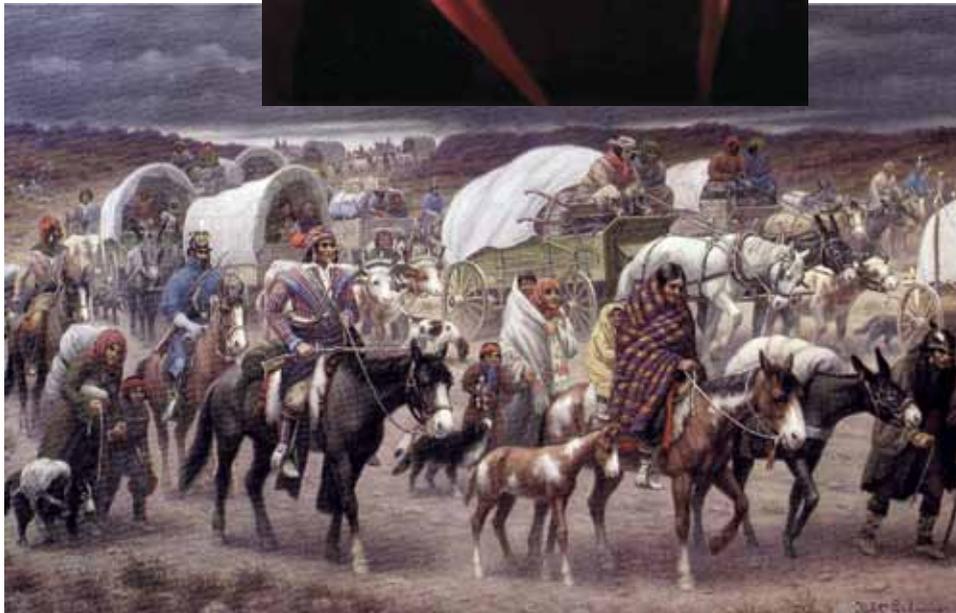
To recognize the crucial character of the point I am presenting, consider the case of two-term U.S. President and scoundrel Andrew Jackson, who served as a puppet for the London and Wall Street speculative interests in cahoots with British and Wall Street swindlers such as Aaron Burr, Martin Van Buren and their immediately leading accomplices.

It was that trio of principal schemers and their followers, which bankrupted the United States of their time through a swindle conducted against the essential economic bulwark of the U.S.A.'s economy in that period. This was done by a fraud against the Second National Bank of the United States, thus creating the terrible financial Panic of 1837 which left a trail of blood and tears through our nation, down into Florida, up to and

President Andrew Jackson, a scoundrel and London/Wall Street puppet, participated in the genocidal campaign against the Cherokee nation; the intention was to spread the London-steered slave system into the former Cherokee territory. Shown: Jackson (right); the Cherokee "Trail of Tears," by Robert Lindneux.



Ralph E.W. Earl



beyond the site of the Cherokee nation, which led into the outbreak of the Civil War. This was done through such dirties as Andrew Jackson's part in a genocidal campaign against the Cherokee nation, which was intended to clear away that nation by means of a deliberate genocide in which Jackson was a prominently culpable figure, a campaign whose intention was to clear the territory of the Cherokee as part of the spread of the London-steered slave system into that same territory. This was done by such means, combined with the British intention of destroying the United States, to prepare the way for the U.S. Civil War launched by that British monarchy whose reign must always be remembered as the pestilence of the New Venetian Party which had spawned the British empire.

for their notions of legal authority. Such ignorance as theirs should warn us of the citizen's obligation to condemn, more or less equally, the crimes of intentional malice and those of the kind of seemingly innocent ignorance whose practiced foolishness amounts in effect to serve as also a true crime against our nation, and relevant other nations. Thus such pitiable folk also betray themselves.

Certain qualities of ignorance, when shown by even a simple citizen, or a citizen with the qualifications of a professional, must be considered as a fault which demands relevant corrections, or those remedies against negligence, which, in principle, also require appropriately prompt and efficient remedies.

The politically illiterate U.S. citizens today, still sing the praises of Andrew Jackson, and manage to overlook the swindles against the United States also done by such swindling bankers of Boston, Wall Street, and the British monetarist empire, as by aid of the roles of Aaron Burr, Martin Van Buren, and their other London-based Wall Street leaders.

It would be most urgent to take into account the effects of the looting of not only the purse, but also the minds of so many of our citizens, still today: poor citizens, who profess themselves admirers of the scoundrels, fooled admirers who believe foolishly in the doctrines they associate with the so-called "Jacksonian tradition."

On the basis of the two points whose types I have just emphasized, we should consider the evil effects of the show of ignorance by past and present advocates of the mixture of the evil represented by the stubborn ignorance among both leading, and other political figures of our republic. This has been the source of the sheer maliciousness and the ignorance of those who defend malicious expressions of ignorance as their pathetically misguided basis

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## I. The Idea of a “Future”: A Systemic Clue

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*To rephrase my opening argument above:*

Unfortunately: heretofore, the commonplace presumptions respecting the basis for assumptions respecting man’s knowledge of his imagined “world outside,” the citizens’ reliances on sense-perceptions *per se*, had been commonly tied, widely, to the often deadly, inherently deceptive notion of an “elementary, bare” human sense-certainty as such.

We might properly choose to regard the simplest illustration of this troublesome point, as typified by the case of the relationship between Bertrand Russell and what I have identified above as his notable dupe, Alexander I. Oparin. For Oparin, life had existed only as the presumed effect of a statistical freak-show of a type which was close in character to the pathetic fantasy of John von Neumann’s cult of a statistically random universe, which was also his belief as to his situation within the bounds of an infinitely increasing density of “random numbers.” Oparin’s hoax had been a virtual copy of the super-densely hollowness of the pathetic numerology of von Neumann, as both of them, like Professor Norbert Wiener, were the essentially sly, but foolish dupes of Bertrand Russell.

It is notable, that the doctrine of such dupes of Bertrand Russell, had no actual principle of physical science; their belief, at the bottom of the matters before them, was entirely negative: the denial of any actually universal principle in favor of mere social conventions among the members of oligarchies. It must be noted that the root of that substitute for any actual physical principle, was essentially the same denial of the existence of efficiently existing physical principles which had been put forward by Rudolf Clausius’ launching of the oligarchical hoax which came to be known as the “Second Law of Thermodynamics.”

If only in a curiously malicious sense, there is no physical principle within the dogma of Clausius and its

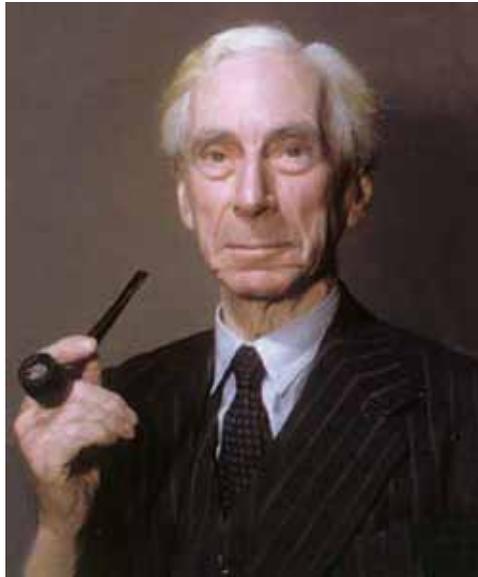
like. The so-called “Second Law” is, as the British empire’s oligarchy insists, a denial of the actual existence of any actually physical law. The social, not physical law, professed by the British imperialist monarchy’s reign over Africa, among other victims, is the tradition of the same “oligarchical principle” associated with the Roman Empire and with such among its still famous predecessors as the triumphant predators of the Trojan War. It is the typified expression of the legendary tradition of oligarchical tyrannies’ intended denial of the right of the victims to use “fire.” It is the commitment of the British empire of today, to reduce the human population of this planet by means of

methods of systemic mass murder known as the “oligarchical principle,” and also known as “The Second Law of Thermodynamics,” which repeatedly unleashes, as, again, today, and as Bertrand Russell had prescribed as a permanent form of practice, the means of genocide common to the Roman empire and to the British empire, as to Adolf Hitler, Britain’s Tony Blair, and Blair’s British President Barack Obama, and their like, throughout so much of the world, then as now.

For my own purposes, as in this present report, reality is presumed to be in correspondence with the system associated with the expanding map of the history of “life” developed thus far within

the range of the work on the history of life by our team’s Cody Jones et al., as to be found among “the Basement” studies up through the present update of our team’s, and related references. The “translation” of the content of those studies, is to be referenced to the work presented under the category of my developments in physical-economic science, developments which I trace from the work of Nicholas of Cusa’s **De Docta Ignorantia** and the consequent function of *vicarious hypothesis* (i.e. **metaphor** which was crafted by Cusa’s follower Johannes Kepler.

*For such cases as the opposing, pathological policies and conceptions of Bertrand Russell and his foolish puppet, Oparin, their selected subject is only asserted to be a living quality of personality in the*



*The doctrine of Bertrand Russell, and of his dupes, such as Oparin, denied universal principle, “in favor of mere social conventions among the members of oligarchies.”*

arbitrarily adopted intention of each of them; in fact, what might be termed as “the conventional opinion,” provides no evidence of the type which we might consider as self-evidently “sense-perception.” Their dogma represents a shadow of something to be considered more or less precisely as likenesses of the aprioristically numerological presumptions of Bertrand Russell dupes Alexander I. Oparin and John von Neumann.

### Now Comes the Subject of Wilhelm Furtwängler

We must properly discredit the frauds of the so-called “applied mathematics” of Russell, Oparin, Norbert Wiener, John von Neumann, and their like. However, for this occasion, we have a far better choice of subject available to us: therefore, we turn our attention here to the crucial physical-scientific discoveries which deeply underlie those relative certainties already well established by the discoveries of one certainly among the greatest musical directors of the recent century, Wilhelm Furtwängler. Furtwängler’s proofs are not musico-mathematical; they are, as I shall emphasize that point in the course of this present report, ontologically human in the deepest and fullest, scientific sense of that choice of terminology.

Therefore, it will be shown in the following pages, that the statements which I have just presented are neither wrongful, nor unduly emphasized. Quite the contrary, what we shall have claimed on such account, will have only begun to treat what we can claim on that account, here; it only scratches the surface of what wiser persons than we might not properly dare to consider as being entirely their own. What the best among them have created, has been, in each instance, chiefly their nourishment of a precious inheritance which they have adopted as their own, as the case of Wilhelm Furtwängler should make that point of universal principles clear.

For contrary cases, such as the intimately related, but contrary and pathological policies and conceptions of Bertrand Russell and his virtual puppet, Oparin, the *subject-matter* as that pair define it, was merely asserted to be the creation of a living creature, or personality. It was adopted as the fruit of the arbitrarily selected intention of each of them. Each of them is to be treated as if he, or she, (or, “it”) were self-conceived to perform a function akin to that of a “wind-up toy run-

ning down.” In this matter, the fact of the defects inhering in a reliance on “facts” attributed to from-the-bottom-up opinions respecting sense-perception *per se*, has been much more evaded than it had been avoided, despite the relevant, warning words of caution on this account to be found in such locations as the relevant, concluding section (*i.e.*, “*Application to Space*”) of Bernhard Riemann’s celebrated 1854 habilitation dissertation,<sup>4</sup> or the later discoveries of Max Planck and Albert Einstein.

From that standpoint of the several references thus presented here thus far, what is already customarily regarded as physical evidence is, merely, in fact, a shadow cast by reality, rather than the relevant reality as such. To restate this same point: from an alternate standpoint: what is often taken for facts in “hard” evidence, even about a century or more earlier, is merely a shadow cast by what has remained, so far, customarily, unknown.

Therefore, on that subject, the history of leading physical-scientific practice since the crucially important contributions of Max Planck and Albert Einstein, begs, more and more, that we consider the fundamental problems of scientific practice by considering the universe as if “from the top-down approach”: from the galaxy as a system, as this is implicit in the work of Riemann, and, emphatically, the standpoints of such among his revolutionary followers as the highly relevant cases of Planck and Einstein, as in the latter pair’s considering the universe from its mega-galactic vantage-point as a whole (rather than the currently “bottom-up” vantage-point of the particular as located, as if generated from within the extremely small).<sup>5</sup>

On that account, consider certain crucially relevant discoveries by that great modern scientist *in the field of the physical principles of musical practice*, Wilhelm Furtwängler. Furtwängler had done a great amount to free the full range of a valid physical science from the inherent fallacies of the search for the futile pursuit of alleged origins in the domain of the infinitesimally small. He had done so, by opening the proverbial “gates” to the needed matters of physical science, when science is considered from the relevant standpoint of

4. Bernhard Riemann, *Über die Hypothesen, Welche der Geometrie zu Grunde liegen*. Werke, Teubner, Stuttgart, 1902, “III. Anwendung auf den Raum,” pp. 283-287.

5. The interlinked work of Lejeune Dirichlet and Bernhard Riemann has common qualities directly linked to the consequent work of Max Planck and Albert Einstein, in their characteristics.



*The Russian biogeochemist Academician Vladimir Vernadsky (1863-1945), a contemporary of Furtwängler, identified the ontology of matter, as the non-living (inorganic), the living (organic), and the noosphere (human cognitive life).*

that which is the universal domain of the seemingly tremendous.

In an essentially related aspect, we must deal with the troublesome issues of the fact of the ostensibly paradoxical existence of an ontological distinction of living processes from the non-living; this must be done, provided that we are being very careful not to fall into the wicked sophistries of such as Bertrand Russell and Russell's silly dupe, the self-described, poor, wind-up toy among similarly self-defined wind-up toys, such as the relevant case of Alexander I. Oparin.

We shall put the case of Russell and his dupes to one side for a certain amount of time, after we have examined the notion of a universal (but not bounded) universal reality, a reality which we shall locate in the principles which we must more than fairly consider as discovered and developed by Wilhelm Furtwängler.

Therefore, I now proceed as follows.

### **The Role of Vernadsky**

To attain the insight into the work of Furtwängler which later considerations now bring into view, we must look into the work which a relative contemporary of Furtwängler's, Vladimir I. Vernadsky, brings to bear on these same matters.

Since the work of V.I. Vernadsky, the essential ele-

ments of what is named "matter," are identified ontologically, respectively, as: (1) *non-living*; (2) *the living*; and, (3) *the noëtic as specifically the principle of human life*. The common distinction of the latter two categories, which is locatable in the qualitative distinction of living from non-living processes, is that the qualification of "life" depends upon *an anticipation of life* as if existing both "prior to", and, "later than" the moment that the "whispered" prescience of life's existence, is experienced. It must be experienced in a distinguishable, foretasted moment, prior to, and also following the apprehension of the association of a life-form *per se*. Use the respective terms "foresight" and "hindsight" to denote those such special qualities of the relevant subject-matters. Those, and closely related distinctions, as Wil-

helm Furtwängler demonstrated and emphasized the importance of that aspect of the matter, are to be treated by us here, as being ontologically, crucially significant experiences.

This coincidental feature of the work of both Furtwängler and Vernadsky, is crucial for the purpose of the commonly shared ontological basis, and I shall treat that matter so at the appropriate moment in this present report.

However, there are some additional common roots to be considered here. My own expertise, for example, lies within the domain of what has remained the little-known branch of science properly named as that "science of physical economy," in which I have been uniquely successful since my first such professional ventures as a long-ranging economic forecaster, since my professional appearance in the instance of a remarkably successful forecast which I had presented in 1956-57.

The notable difference which my discoveries have represented, lies essentially in the fact that the generally taught methods of what is usually, mistakenly, considered as professional forecasting, have been, predominantly, essentially, merely statistical extrapolations of the past, and are therefore intrinsically incompetent; whereas, my own are based on what usually remains as

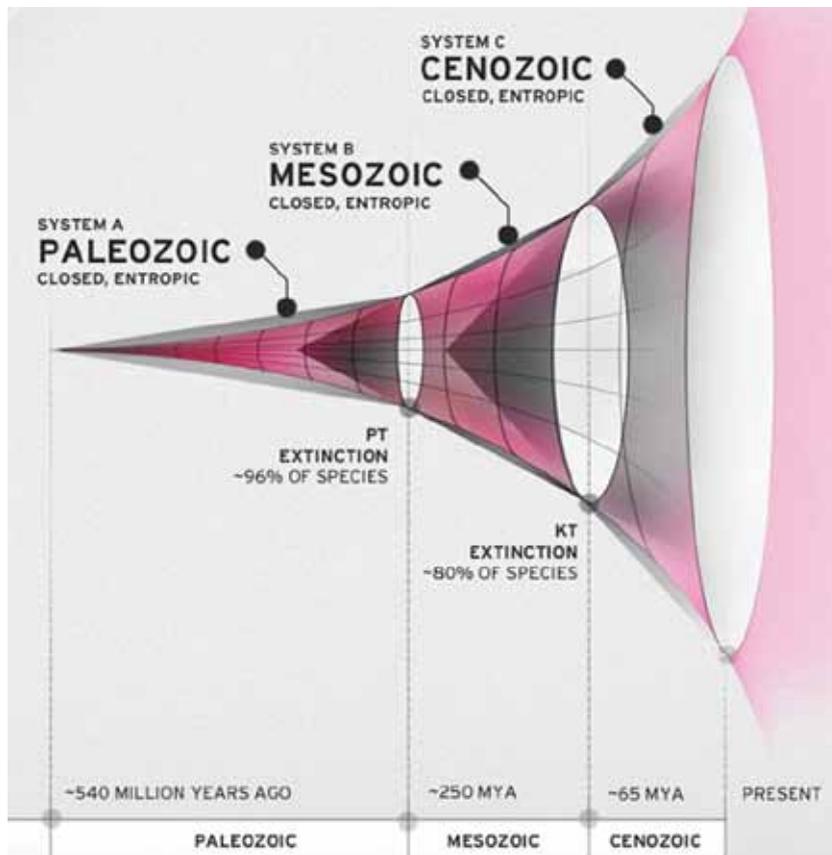
my relatively unique practice of physical-economic considerations as such. The crucial point to be emphasized in that context, is: “To foresee the future, one must have actually physical knowledge of that future,” as this continues beyond mere “economics” into the history of the present and future life within the Solar system and its subsuming galaxy.

The principle of true success, as in economic forecasting, is usually not popularity, but service to the needed intentions of mankind, especially when and where those services are rarely found.

At this point, let us examine the argument for what I have actually done successfully in this matter.

The “statistical method” commonly used (or, merely pretended to have been used) as an asserted basis for “economic forecasting,” precludes, by its very nature, the most essential requirement for an actual forecast: the existence of a certain future, may, or might not be a new development. The fact of that matter has been subjected to a crucial test by the fact of the role of the original “Glass-Steagall Act” from its 1933 installation by Franklin Roosevelt, until the tragic cancellation of that same Glass-Steagall Act in the closing months of the Administration of President Bill Clinton. In effect, the cancellation of Glass-Steagall had been demonstrated to have been an act of virtually criminal insanity, as recent suggestions for a “modified” version of Glass-Steagall would also be a willful act of virtually criminal sanity.

A team of my associates has mapped the known existence of forms of life on Earth with excellent approximation in use of the best standard sources. The outcome, using galactical, as also Solar and other measurements, is that the existence of life within those known spans has been regulated by a principle directly contrary to the intrinsically fraudulent “Second Law of Thermodynamics.” Life on Earth, and as considered otherwise, has been governed by progress to more successful forms of life, as this may be measured in ther-



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*The investigations of the LaRouche Basement research team, using galactic, solar, and other measurements, have demonstrated that “the existence of life within those known spans have been regulated by a principle directly contrary to the intrinsically fraudulent ‘Second Law of Thermodynamics.’”*

modynamic terms as evolutionary progress with respect to increases not only in what is recognizable as the effects of ordered increases in relative energy-flux density, but also in willful choices of practices and effects of such changes on existing expressions of life.

The complementary consideration is, that lowering the rate of increase of energy-flux density tends to the effects of cultural, or even human-species extinction.

This latter consideration has what some might consider to be an interesting parallel consideration. In the domain of military policy, the general trend has been that military success requires increase of the effective equivalent of “energy-flux density applied,” as “the principle of the flank” only illustrates the point. Now, with the advent of thermonuclear capabilities, war has entered a terminal stage in practice. When the effective equivalent of applied energy-flux density reaches a thermonuclear weapons phase, the attempt at warfare

approaches the virtual certainty of human self-extinction, as is presently the case. *War must then submit to the principle of reason.* In brief, that means that a fixed system of economy, must now submit to scientific principles of reason. Similarly, economic practice, and the principled ordering of such practice, is no longer a matter of an available choice of modes; war and economy must now submit to reason, rather than arbitrary means of political power.

It is notable that that does not mean “world government” as those words might be considered in the sense of what those words would signify today. Quite the contrary. “World government” in the sense of the meaning of those terms today, must be banned as signifying the evil most to be despised and feared. “World government” means, in fact of practice a form of tyranny known as the tyranny of a Roman-style empire over the world. The sovereign form of separate nation-state has proven itself to be the mandatory guardianship against the oligarchical tyranny which the presently reigning British monarchy represents in fact, and by inherent intention.

It is “world government” in the sense intended by such a scoundrel as a Tony Blair, which is disqualified from control over the practice of government. It signifies that figures which do not meet the intellectual and moral standard implicitly specified by our original Federal Constitution, or “populist” figures in general, such as the properly considered Andrew Jackson, are not qualified to enter our Federal Government, for example. The retreat to the intrinsic bestiality of repealing the Peace of Westphalia remains, thus, a crime against humanity: reason, not tradition or incumbency must rule.

That just stated fact has been defined, from the work presented by relevant professional sources during recent decades. The principle of life, as known to us presently, is expressed through evolutionary processes which are characteristically directed by the effect of anti-entropic trends in the evolutionary processes which are, in their general expression processes in a system of anti-entropic processes.

In human behavior, as counterposed to other forms of life, the essential distinctions are specifically voluntary choices of either adoption of, or negligence of the requirement of “upward-directed” human changes in the potential productive powers of human labor, as measurable per capita and per unit of increase of physi-

cal productivity. The relevant unit of measurement for this function is “increase of the energy-flux density” per capita and per unit of volume. These elementary considerations are willfully disregarded by the general practice of economic policy-shaping in respect to long-term trends in policy-shaping through most of the Americas and western Europe since those bench-mark times, as we have experienced exactly this downward trend in physical fact, in net results since the assassination of U.S. President John F. Kennedy.

There is a crucial intersection between my methods of forecasting and the results secured by Furtwängler’s discovery of musical principle.

### **Vernadsky & Furtwängler Again**

Compare the heydays of Vernadsky and Furtwängler, to the history of the leading physical-scientific practice under the crucially important contributions of Max Planck and Albert Einstein. This presents a history which begs, more and more, still today, the important contributions of the outlook provided by considering the fundamental problems posed by considering the universe “as if from the top, down”: emphatically from the galaxy as a system, as implicitly foreseen in Bernhard Riemann’s habilitation dissertation.

Now consider the physical principle on which Furtwängler’s unique discovery in music was based, a great physical giant step apparently beyond the work of Johann Sebastian Bach, but, at the same time, a realization of what was implicit in what Bach had defined. Not replacing Bach, but as one great giant step beyond, as if into a new physical dimension of our universe. The new giant step which Bach had made possible.

For reasons which I shall clarify later in this report, let us imagine that the experience of a musical note might be described as like a “bubble” within which the bare idea of the note-as-such is contained. In the preferred case, as by Furtwängler, the actual hearing of the note may be sometimes anticipated immediately prior to being heard, but without actually being heard, and, in some cases, after the core of the tone has been heard. Furtwängler elaborated the relevant phenomena for his readers under the descriptive term of “Between the Notes.”<sup>6</sup>

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6. During the late, post-“World War II” interval, I concentrated my attention frequently on the profound difference between the performance of Schubert’s *Ninth Symphony* by Furtwängler and Bruno Walter, re-

It would not be impossible, but next to impossible, to attain any competent insight into the nature of the systemically ontological distinction between “sense-perception” of non-living processes and actually living processes, unless we relied to a large degree on discovering Wilhelm Furtwängler’s insight into those ontological implications which separate putatively “merely spoken,” from “Classical musical” utterances. The same problem appears otherwise in the distinction of Classical prosody from what is relatively a mechanistic quality of prose, as this distinction is to be made for the case of Johannes Kepler’s notion of what is otherwise named “metaphor,” or, by Kepler, “vicarious hypothesis” (as a relevant example).

We have now reached a point of interpolation from which the body of this present report will now proceed toward the deep implications of Wilhelm Furtwängler’s profound scientific discoveries in music (and much more).<sup>7</sup>

### Franz Liszt as Czerny’s Puppet

Illustrate the point being made on this account. For example, look to the following background with the immediately following comment:

Ludwig Beethoven once received a tutor known as the piano teacher Carl Czerny, who came accompanied by that tutor’s pupil, the young Franz Liszt. After



EIRNS/Stuart Lewis

*The corruption of Classical music under the influence of 20th-Century modernism, notably, as peddled by the “soulless” Congress for Cultural Freedom, is to be contrasted to the “impassioned scientific rigor” of such as LaRouche’s “late dear friend,” Norbert Brainin, principal violinist of the Amadeus Quartet, shown here performing with pianist Günter Ludwig in 2007.*

Czerny and young Liszt had departed, Beethoven declared that “the boy has great talent,” but added that “that criminal, Czerny will ruin him!”

That incident is typical of the process which produced the corrupted simulation of Classical artistic poetry and music which came to be identified as Nineteenth-century “Romanticism” as experienced in the setting of the notorious salon of the ill-fated Queen Marie Antoinette’s sometime resident parasite, the notorious Madame de Staël. The split between the legacy of J.S. Bach and the Nineteenth-century trend in Romanticism, was a precursory phase for the entry into Twentieth-century Modernism, which, in turn, led into the post-World War II depravity known then, and later, as that collectivist set of performing soulless puppets known as “The Congress for Cultural Freedom.”

To illustrate the crucial point to be emphasized in this immediate location, among leading modern directors of symphony orchestras, Wilhelm Furtwängler is unique for his achievements in bringing the great talent of notable directors of Classical orchestral performances to an explicit state of literally physical-scientific insight, although a significant number, such as my late dear friend Norbert Brainin, the Principal of the Amadeus Quartet, remain notable for their impassioned scientific rigor in the scientific matter of Classi-

spectively. Although Furtwängler defended Bruno Walter personally, against Hitler’s gang, the, later, post-war Schubert performance by Bruno Walter was musical disaster—it was really bad; while the famous, post-war performance by Furtwängler was among the greatest accomplishments of his time, reaching specific qualities which are to be fairly characterized as among the few greatest performances on record. The recorded performance by Furtwängler has the special importance of illustrating the specific scientific principle which is my subject in this present report.

7. It has been my intention to bring as much of Wilhelm Furtwängler’s discoveries into play here as needed to bring the specific physical principles of his great, and unique, musical discoveries into focus.

cal tuning. Arturo Toscanini and Bruno Walter, were typical of a different matter. However, it was the plunge into “elevated pitch,” as promoted by the post-World War II Congress for Cultural Freedom (CCF) which has led into the actually criminal intentions and practice which has tended to take over, and destroy Classical musical composition and performance since that time.

The downward cultural trends have worsened at an accelerating rate since the modernist-tending trend of the Twentieth and, now, Twenty-first centuries. As I have just emphasized, the Congress for Cultural Freedom, founded in June 1950, was typified, according to my personal experience back on December 2, 1971, by the case of the now-deceased Sidney Hook, represented one tier of a continuing series of successively deeper plunges into moral and related degeneracy, whereas President Barack Obama’s crony and evil-man-of-the-dark-chamber, Cass Sunstein, now typifies those lower “White House” depths of what has been a currently aspiring form modelled on the precedent of what has been, literally, “the frankly fascism” of the Hitler-era type encountered today.

Now, henceforth, our preferred subject in this report is human creativity as the working principle on which all categories presently, conditionally depend. To that purpose, let us now proceed to consider the principle of “fire.”

The key which opens the doors of everything pertaining to almost everything, is that only mankind chooses to use “fire” intentionally. On that same account, the evolution of the living processes which have emerged on Earth has been directed by a chronic increase of what is identified as a general increase of energy-flux density in the evolution of living processes, as from the simple use of fire by “primitive mankind,” to mankind’s presently willful command in mankind’s willful use of thermonuclear fusion.<sup>8</sup>

### **Discovering the Power of Reason**

The essential, practical question which this present line of reporting intersects, is expressed by the words: “What is the shadow cast, as distinct from what is actually the ostensibly unseen, ‘but actually efficient’ substance? What is the unseen reality which appears to our

sense-perception as the pseudo-substance, ‘the mere shadow’ of experienced sense-perception?” The implication of the line of discussion to which I have steered us here this far, is, thus, the crucial question to be addressed now. Are human sense-perceptions real? Are they, essentially, “real shadows” of the unseen? The common curse of mankind thus far, is to be located in the attribution of certainty to falsehood, such as that of Cass Sunstein which is properly sensed as being merely another evil shadow cast by the horrid stench of an unseen substance.

To illustrate the direction of progress being emphasized here, consider: What is the state of affairs in Solar space produced by the successive stages of optimal acceleration-deceleration of flight, at optimal thermonuclear velocities, from Moon to Mars, and in return flight, each within about a week’s flight, each way? Suddenly, then, what had been accepted as space and time, respectively, no longer exist as “standard values” within the relevant, matter/anti-matter domain of the human species’ experimental realities. Mankind no longer exists within the imagined confines of the sense-perceptual domain of the beasts.

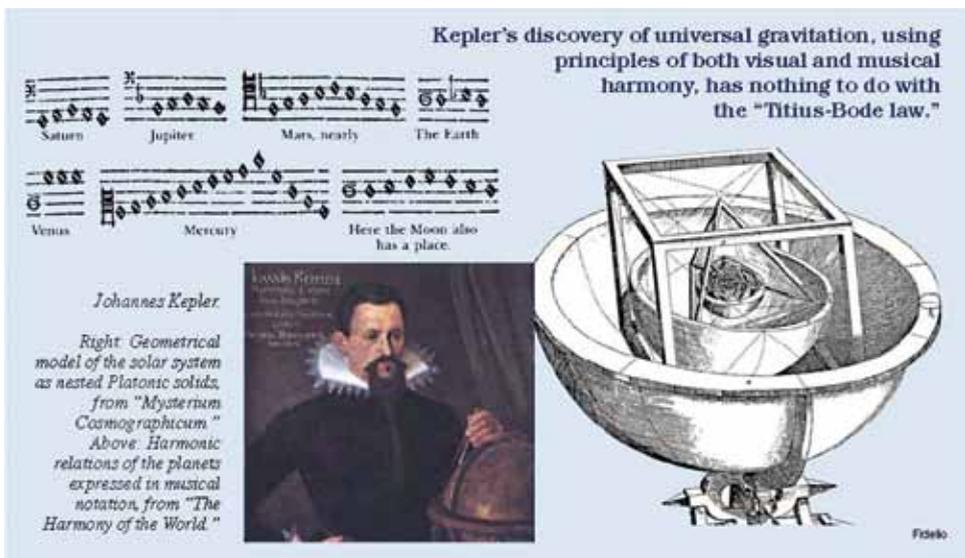
Such considerations are forced upon our imagination by the implications of the notion that the continued existence of the Solar System might be expected to become extinct within the coming two billions years, and mankind excluded from existence in that domain much sooner. Would our human species become extinct in the course of such time? Consider the existential implications of such a question as that. Could the conquest of a threatened extinction warrant a triumphant shout!?

### **On the Subject of Alternatives**

With the presently existing knowledge of the inherent error of the belief in the simple certainties of sense-perceptions, it is no longer “self-evident” that the existence of the human species is defined by the parameters of human sense-perceptions. The notion of a week’s thermonuclear flight from Moon to Mars, helps to bring the reign of the familiar old delusion toward its close. We are now compelled to discover radically new kinds of parameters for human existence, an existence within bounds which, so to speak, lie outside what we tend to consider presently as “natural.”

Therefore, pause to consider the Classical standards of music which are intrinsic to the natural potentials of the human mind. But, also, look more closely at what

8. Hence, the intrinsically fraudulent character of Rudolf Clausius’ “Universal Principle” of Entropy.



Johannes Kepler's use of the notion of "vicarious hypothesis," is otherwise known to us as the notion of "metaphor."

has been discovered by V.I. Vernadsky. With Furtwängler's discovery of the principle of Classical composition, and with the implication of that discovery, now respecting music, which was experienced from Nicholas of Cusa's acquaintance with Filippo Brunelleschi's process of construction of the cupola of Santa Maria del Fiore, a change in society's view of the universe had occurred. The marvelous expression of genius which Wilhelm Furtwängler had adduced from the higher principles of Classical musical composition, has presented us with access to something which is presently much overlooked, but which, when considered aptly, presents mankind with a reality which is, otherwise, intrinsically superior, by orders of magnitude, to mankind's estimate of his reality otherwise.

Admittedly, the experience of Furtwängler's treatments gives us something qualitatively superior to those of his putative "rivals" in every respect. The quality of the mental-life performance associated with that change, represents, "objectively," a qualitatively superior state of mental life, to that of "the formerly conventional system," in every relevant, practical respect. This was to have been noted in respect to the uniquely original discovery of the principle of gravitation by Johannes Kepler, still today. The relationship of this to the impact of Bach, is clearly definable, as the cases of the physicists Max Planck and Albert Einstein also illustrate the point.

The same physical principle, of Cardinal Nicholas

of Cusa, as echoed by the great principle of Cusa's **De Docta Ignorantia**, was echoed, intentionally, by Johannes Kepler's notion of the great principle of "vicarious hypothesis"—i.e., metaphor, on which the discovery, by Kepler, of the universal principle of gravitation had depended. It was the same principle which underlies Albert Einstein's emphasis on a domain of "the finite, but unbounded," the domain of "metaphor," and the notion of "matter/anti-matter."

The correlative of physical scientific progress and

Classical musical composition, represents a more broadly defined notion of "type," one which applies efficiently to both scientific, and the other Classical artistic modes of progress generally.

## II. The Domain of the Unbounded

What I shall now indicate as having been the great physical-scientific discovery made by Wilhelm Furtwängler, will serve to carry this present view of mankind into the promising beauty of a previously undiscovered dimension, as I shall demonstrate that bare fact of the matter, by the means of what I shall have written within the completion of this present report.

That dimension already existed in fact, and that is exactly what Furtwängler demonstrated. Admittedly, few musicians, even among the leading artists, fully grasped what Furtwängler had accomplished, even while they might have admired the result, even greatly. (It were easier to admire effects than to create them.) The actual performances we have known, as both our experiences and what we might expect to experience, have often demonstrated that much, or more; but, this recognition was achieved within the reach and bounds of a presently retrospective standpoint.

Thus, within the limits of what I, for one, came to recognize, the best of all of the relevant musicians and scientists tended to recognize, that there was something

very precious, still to be recognized there. The difference was, first of all, that Furtwängler made the fact of his discovery explicit in his practice.

For example:

Some among my circles, here in the United States, and abroad, had become devoted to the work of both the great, and, also, not so great composers and performers. All of the best of such experiences, still lead toward something even more than the exceptionally wonderful experience of Furtwängler's conducting.<sup>9</sup> I have spoken, thus, of music. My intention here, is also to present the implications of something more profound than music itself, and, then, next, something now to be added from me, personally, here. That means something to be added from my experience of the work of Furtwängler, something which is to be added, now, from the subject of the great advances in contemporary physical science, including the domain, most emphatically, of V.I. Vernadsky, and certain others. The resulting two sets of contemporaries converge in a very special way, in a manner and degree which I shall present here.

I identify the most crucial conception as follows.

What I had come to recognize, since early 1946, from outside Calcutta, as the most crucial quality of the accomplishments of Wilhelm Furtwängler, is that his accomplishments as a scientist encompass both a transcendental state of what is fairly identified as the quality of his performance of musical composition, and what, as I shall emphasize here, are still, today, and have been not only great music, but, implicitly, reflections of the deepest aspects of presently knowable, far frontiers of physical science. It is the living connection of his approach to music which has supplied that great achievement for physical science, which I point out, here and now, as leading toward his greatest achievements as a personality. It can, and must also be said on that account, that his magnificent discoveries in music, express the very soul of physical science. That is a crucial fact which I must emphasize here, at this point.

Those discoveries express the great principle of metaphor which an avowed follower of Nicholas of Cusa, Johannes Kepler, identified in the notion of a *vicarious hypothesis*, and which the poet Percy Bysshe Shelley presented in the closing paragraph for his **In Defence of Poetry**. It is a connection of the kind which

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9. Another, precious case in this connection has been the late Norbert Brainin, who remains a genius on this same account, in his own right.

both Max Planck and Albert Einstein understood, at least implicitly, and that very well. They, both of the latter, each as master-musician and scientist alike, were, in fact, Furtwängler's *necessary* forerunners.

The crucial point of those concerns of mine which have arisen from as much as I have written here thus far, is locatable in the fact of the inherent tendency for error arising from the belief in reliance on sense-perception as such. What we must seek here, as in related settings and intentions, is a shared understanding; that means the distinction of the intention which Furtwängler's work expressed as its apparent literal, heard intention in performance, from the substance of that work. The notable point to be emphasized at this present instance, is attention to the role of Furtwängler's two essential added elements of communicable effects in the hearing of appropriately composed, and also appropriately performed, "ghostly" elements of the communicable performance. In my own life's repeated experiences on this account, Wilhelm Furtwängler's post-World War II conducting of Schubert's Ninth Symphony, became, in my experience, most prominent among the compelling achievements in orchestral performances. This virtue is specific to the true substance functionally sensed as of the metaphorical elements implicitly "heard" in the performance: the true "effect" experienced by the performer and audience alike.

What is contrary to the sentiment of "die Hauptsache ist der Effekt" of **Das Spukschloss im Spessart** [1960 German satirical comedy film] in this is that the "effect" remains, in principle, as merely the shadow cast by the substance. Such is the essential nature of the entirety of this report.

Once that warning is set into place, we are freed to proceed to the specifically physical-scientific significance of this experience, as this is to be related to developments respecting the extraordinary importance of the role of the principle of "insight" in the exchanges between Wolfgang Köhler and Max Planck on the subject of defining the substance of the human mind. This connection of "insight," also pertains to Kepler's *vicarious hypothesis (again: to "metaphor")*. I shall return to that fact at an appropriate point here below.

All the subject matters which I have enumerated just now, are of profound importance for me; however, there is one among these subjects which lies the most within the reach of my competence and also the bounds of my concern in this present report. That case is the following.

## The Much Neglected Concern

The most fundamental of the issues of physical science which I presently know, is the frequency of an apparent lack of any mode of access to the deeper matters of physical science in what is provided by the currently still prevalent definitions of “physical” science. The essential fact of that indicated difficulty, is the habituated dependency of human beings respecting the bare belief in the faculties of sense-perception. In short, how often, and where may we discover a proof that sense-perception were not entirely an act of sense-deception, were not simply “axiomatic” in the worst sense of that term? Sense-certainty were, in that respect, the greatest of all follies, that of being left dumb.

It is time to be specific! The answer to that question lies in Furtwängler’s notions of the “near” and “far,” the very small, and the very large: two qualities which envelop, and, thus, consume the reductionist’s notion of “sense perceptions,” and which, therefore, escape the perversion of what was virtually that “Euclidean self-evidence,” which is the ontological folly of the notion of “sense-certainty” as such. My thought on that subject can be read, still today, as the thematic “bending stars like reeds” from my lyrical poem of nearly sixty years ago.

My intention, nearly five decades past, and today, represents the self-same implication. The essence of mankind’s existence lies not in words, but, rather the physically efficient power which seems to lie behind them. It is the Classical poet’s intention which casts mere sense-perception’s intention as in the guise of shadows. Words are merely footprints; the words are merely the ghosts of the intention which moves them; it is the passion which is the reality; the words are footprints.

Now, towards the present mission:

First, next, we must bring the subject-matter into proper order. The commonplace, “elementary” folly, is the presumption that “non-living matter” envelops the universe, which, in turn, surrounds living processes, within which human mentality is wrongly presumed to be confined. *How silly that presumption is!* The fact of the matter is, that the most powerful and inclusive aspect of the universe known to us, creativity, contains the possibility of our existence. Whereas, the most powerful force which we encounter within the bounds of life on Earth, is human creativity as such. The creative power of the human mind reaches outward, seeking to reign over us, as a creature in the likeness of the Creator, whereas, we, the living “see ourselves as if in a mirror, but that in a darkened space,” as the Apostle Paul had stated.

We live, hopefully, as being the children who inhabit the inner bounds of the decaying century which we presently occupy; but, our mission is to create the coming centuries which we inhabit, as if surrounded with the consequences of our deeds. Whether I live to actually reach the range of a century, or not, our intention must be to change the age which we inhabit, such that the consequences of our willful business of living, shall, indeed, be the goodness of what we shall have been.

Not to do good is a terrible thing!

We must, as I have written and spoken, each practice the art of my “bending stars like reeds,” or it will be as if we had never lived.

So, we reach out, literally, as to the stars, and that which exists beyond. We live as children of the stars, learning to reach out to seek control over what we had thought ourselves powerless to control, as if only yesterday. We are the child-like apprentices of our universe, destined always to reach to higher missions and higher destinies. If we do not accept this mission, we were already as much as dead by one’s own silly choice.

This is a thought—a choice of decision—which has efficient consequences.

As those associated with my intention have seen, we are aware that long before two more billions years have lapsed, our Solar system should have been destroyed. In as much of that lapse of time’s duration as mankind might inhabit, we shall be confronted, as a species, by many missions to complete, if our species were to have become enabled to surpass the Solar system, even, perhaps, the galaxy which we presently inhabit. That must be the practice of our species’ profession.

It can be said, frankly, that that to which all that is leading, is not yet known; yet, we have no appropriate different mission than that intention. In that, we must be content with our unquenchable commitment to our work, the work which the universe has set before us. That is the true nature of mankind’s work, insofar as we are presently enabled to know it.

## On the Subject of Physical Principle

On reflection, and, perhaps, it comes only as a matter of reflection, that the idea of life does not actually exist as what ordinary sense-impression could conceivably know as a real force in the universe. We do experience the effects of life, that among things we identify as “living.” Similarly, we experience the effect of mind, but we know no sensed object as mind-as-such.

That same issue arises in the realm of assessing that quality of “intention” which distinguishes the great performance of a great musical composition from those mere shadows which the performance of mere notes leaves like footprints-in-the-mud in the course of their performance. I could speak of forceful performances which leave behind the sense of a well-embalmed corpse, or a mere puppet-like construction which leaves behind the effect of being as a synthesized embalming. The qualities of life and mind are qualities whose essential existence dwells outside the reach of mere matter, sculpted or in motion. Such is the difference between what A.I. Oparin’s or Bertrand Russell’s mere opinions represented, as compared to actually living processes. The same irony confronts us in the attempt to evoke sincere qualities of belief from mere words; great Classical works, even less impressive communications have real intentions and related effects, but those forces do not reside within mere words, or other sorts of symbols.

The Classical achievements in composition, gained by drama, poetry, and kindred beautiful compositions, like song, bespeak real forces which can not be properly mummified as mere words or other symbols. Such real achievements are actually experienced only in the immediacy of experience of the process of Classical artistic creation, which actual life inhabits, and shadow of life’s passing may be interred. The challenge to mankind, is to recognize that difference between the reality which creates the poetry, and leaves the footprints, perhaps only briefly, behind.

Substance exists; the problem is that of choosing where to find it.

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### III. The Real Physical Principle

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*“The forces which do not reside within mere words, or...”*

Just as a reminder, as we now enter the concluding chapter of this report, the governing intention in this composition’s entirety, presents a solution for overcoming what has been the stubborn error of relying on sense-perception as a standard of evidence bearing on the role of any actual physical principle. As I have already indicated in the preceding chapter, the actual effect of what has often been considered “elementary” reliance on sense-perception, creates the fatal folly of mistaking a man’s mere shadow for his actual self. As

I have already indicated, here, above, the indicated remedy for that error has been implicitly provided by the combined role of respectively “the nearly heard” and “the distant heard” of the great argument by Wilhelm Furtwängler. That argument, by Furtwängler, had depended on crucial, related arguments by both Max Planck and Wolfgang Köhler, all considered in the light of Köhler’s correction made to Planck on the correct principle of the human mind. This requires that we also take into account the important contribution of principle by Albert Einstein on the subject of matter/anti-matter. Furtwängler’s final treatment of the performance of Franz Schubert’s Ninth Symphony has presented us with a relevant demonstration of Furtwängler’s discovered principle of “nearly” and “distant” heard, just as Köhler’s argument on mind persuaded Max Planck.

The array of illustrations which I have just summarized, must be subsumed by J.S. Bach’s principle of the fugue, which is the essence of all competent composition of music, inasmuch as the principle of the Bach fugue is the principle of employing the future to define the present. Furtwängler’s use of “near” and “far” hearing, expresses the principle of the concept permeating the Bach fugue. The music which does not serve that same Bach/Furtwängler principle of the future, including the case of the inherent failure of so-called “popular music,” is to be considered as seriously defective. Just so, the argument of the so-called Congress for Cultural Freedom (CCF), introduced in 1950, not only imposed a worsening trend toward cultural trash on Europe (and elsewhere); the effect of the influence of the CCF had manifestly lowered the cultural/intelligence-level of the trans-Atlantic world in a disastrous succession of accelerated “steps” since that time.

Unfortunately, the expulsion of Germany’s great Chancellor Bismarck, had turned out to be the crucial first actual step of the world into a virtual simultaneity of the first “world-wide war” launched by the British empire. From that moment on, there were steps virtually into Hell, such as ominous effects, in France, of the assassination of France’s President Sadi Carnot, the Dreyfus case, and the British Prince of Wales’ alliance with Japan’s Mikado to launch the first major outbreak of the first of a series of World Wars, a series which actually never ended since the series began (actually) with that 1890 ouster of Chancellor Bismarck which actually unleashed the first “World War.” The assassination of U.S. President William McKinley on

a globally ominous Sept. 6, 1901 enabled its unfolding to proceed.

It is of crucial importance that that aspect of modern history be treated exactly as I have done here: it is not events which make history, but the process of human history which creates the important events which actually shape that history in a truly meaningful sense in such matters. We, as individual nations, or peoples, are often, indeed, enabled to play important roles in the shaping of some of that history's events. Admittedly, often those who play such roles have no competent insight into what they do, or why they do it, but, with rare exceptions, it is not the event itself which actually shapes the unfolding course of the history of a process in history. Considering the view on this matter by Wolfgang Köhler, is a useful approach to insight into this aspect of historical processes.

It is therefore important that the crucial argument presented here, be restated as follows.

During the course of the few recent years, the so-called "Basement Team" of my associates, had succeeded in bringing about an important leap in their knowledgeable proof and understanding of the role of creativity as a "mandatory" rule of the experimental evolution of life in the known universe. The demonstrated principle of what are to be classified as "world wars," is that the array of successive advances in the ordering of species is not merely successive, but that the succession is systemically self-ordered. This applies, as broadly, and safely said, as being inherent to human intellectual progress, and so to manifest "choices" of human extinction, and so to biological extinction generally, as it is to mere biological ordering otherwise.

It is fairly said, that the universe is governed by a principle of universal anti-entropy: progress, or extinction, are each notably available options.



*Furtwängler's notion of "the nearly heard" and "the distant heard" "depended on crucial, related arguments by both Max Planck and Wolfgang Köhler [shown here], all considered in the light of Köhler's correction made to Planck on the correct principle of the human mind."*

## Some Implied Options

Sit here for a moment in contemplation, that we might reflect on a few important conceptions.

Actual progress is not statistical; it is systemic, even implicitly "organic." Hence, the sudden collapse of progress, which had been imposed willfully (not statistically), in the immediate post-war economy, and, once again, in the aftermath of the succession of assassinations of President John F. Kennedy, and his brother and Presidential pre-nominee, Robert Kennedy.

In the U.S. and most of Europe today, for example, progress is not generally systemic, but only statistical, and has been downward most of the time since the assassinations of John F. and Robert Kennedy. That is to emphasize, that, when physical economic growth is the standard employed, the net

physical growth of the U.S. economy has been consistently negative in direction since approximately the immediate aftermath of the launching of both the "Warren Commission" and the U.S. war in Indo-China.<sup>10</sup>

Consider the most disgusting of all popularized hoaxes. The usual economists, or lunatics of that category, consider the gain of money itself as "an intrinsic advantage." Thus, we have the great hyper-inflation which has just destroyed both the U.S. and western and central European economies. Why was such accumulation of nominal money counted as growth, when the Glass-Steagall law enacted under President Franklin Roosevelt was required by all actually intelligent people? How, and why, could the repeal of Glass-Steagall have been considered a sane behavior of a government and its people?

Or take the case of the popular commodity, drugs-

10. The fraudulent trick used, is that of a practice or product "considered popular," the promotion of which is treated as proof of progress, even if the result is disastrous, in fact.

for-addiction? Popular opinion has been recently, speaking clinically, insane. The evidence is that the U.S. government has been predominantly insane most of the time since the election of President Richard Nixon, and that the preferences of most citizens have been, predominately, worse than disgusting. How can “better” be helpful, when we consider the public, and also public standards of what have come to be considered as “useful prospects”?

If we were so awfully-smart, how did it happen that we have destroyed the U.S. economy, more and more, each time our citizens had voted since the close of 2001?

The essential point indicated by all this, and much more besides, is that the standard measures for progress are clinically insane when measured by the popular preferences for effects. Wealth is being measured today in the acquisition of public satisfaction secured by the consumption of loathsome pleasures and, usually, the pleasure sought from the enjoyment of painful diseases of various kinds.

### **What Has, Therefore, Gone Essentially Wrong?**

It is fairly, truly, and usefully emphasized, that it is almost never the individual, qua individual, who actually determines the effective course of history. Admittedly, the individual’s behavior often does act to what appears to be such an effect; but, the individual who views his or her intervention as an individual in the course of the history of nations, is intrinsically a fool. The fault here is rooted, essentially, in *the error of an a-prioristic belief in the categorically autonomous “sovereignty” of the human individual. You must view your role as that of an agent of the making and shaping of history; you must, in effect, treat the mortal self as an agent of an essentially immortal process. If you are truly wise, you view yourself as obliged to participate, as if immortally, in shaping the history which you must participate in pre-shaping from generation to generation. “The rugged individual” is often the silliest of fools to be found on precisely that account.*

I explain that point: you are sovereign only when you assume responsibility for the outcome of that future course of history in which you are participating as an initiator of progress. In real history, “the notorious rugged individual” is a fool virtually born from the depths of foolishness. In real economic science, success is located in the improvements which the present generation forges as the accomplishments of one’s progeny.

I explain that crucially important point, as follows.

I had emphasized earlier, in referring to the characteristic of upward trends in evolution of human achievements, that your successors from future generations must be developed to effect a net increase in the ability of mankind to increase its power to exist in the universe. Not what you do, as much as what you are prompted to shape your descendants to achieve, as a succession of actual net increases in the human species’ power to exist in the universe.

*“You say that you do your part for mankind? How dare you propose such a fraud!?”*

*“You are responsible for the needed degree of improvement in the productivity of each of your several generations of progeny. You are morally obliged to make your successful contribution to that net effect on the future of mankind.” You are obliged to ensure that the several successive generations of mankind will be committed to bring about fundamental physical-economic progress during coming generations. To argue that: “Each of us can only be held responsible for what we do personally,” is not only a fraud, but a very wicked one. You are your children’s and grandchildren’s keepers.*

That is the principle of, for example, the proper design of the Bach fugue, as Wilhelm Furtwängler’s principle of counterpoint demands. Your absolute obligation as a human being is not to repeat the past, but to create the basis for the production of the future. This is as if to say, that you must live in that future, rather than your own past. That is the principle of creativity in our universe; that is the essentially underlying distinction of the actual existential identity of man from those men and women thinking and acting as beasts, thinking and acting in their past, as beasts also do. Animal and related life can exist through biological evolution and related ways. The difference for man is the human mind, the ontology of living within the future, rather than the mere present; that is the true essence of the actual meaning of human creativity, and, also, even the meaning of humanity itself.

### **Mankind’s New Physics**

The characteristics which I have just employed, above, to distinguish the essential quality of the human being from the beasts, must be recognized as the essential characteristics of a person fit to be judged as an expression of the uniquely distinct quality of what the individual citizen must be, that done in the process of rising to a quality of species of higher order than what each has recently achieved since yesterday, and, then,

into tomorrow. In other words, this is the moral principle which distinguishes the properly developing human individual personality from both the beasts and the bestialized humans. You must become what you must become since yesterday, or you are in danger of becoming nothing after all.

This is my presentation, here, of what I (and, you) must become in our self-improvement to become the higher quality of human species than you were today. True human creativity is the activity of becoming a higher quality of human species than you were, hopefully, yesterday.

What does that mean in actual practice?

This means emphasis on human creativity per se. Take two examples of this notion of creativity as such into consideration.

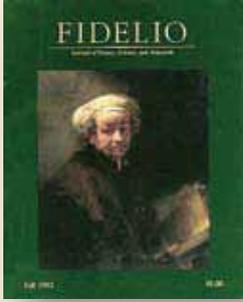
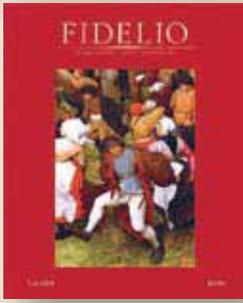
The power of man on this account lies in part with man's creation of instruments which supply the human prototype with devices which increase the quality of the productive powers of labor in principle of design of the combination of mankind and mankind's power to act creatively in the universe. This power just identified points to the role of both the development of the human mind and the tools which it creates, to the effect of recreating the human phenotype into becoming, in prac-

tice, a species more powerful, more highly developed in its own quality of species-in-action in nature, than anything earlier.

What we are enabled, and devoted to accomplishing, according to this perspective takes man out of the domain of a specific type of a fixed image, into a truly creative being, a being which absorbs and uses what had been, earlier, powers of actions reflecting states of the universe which had previously not been included in our human nature; but absorbing elements of a higher state of the processes which have acted upon us, we create in the practiced imagination powers as of mankind, which we have seemed to have absorbed into our own being, and made, thus, an efficient expression of our will to develop what the universe must be intended to become. As we absorb higher states of organization within our universe into our own nature, as through absorbing powers taken from outside the ontology of things presently "in our nature," we expand those powers of our person, and become, thus, beings of a higher state of nature than we had been before. Creative mankind is not simply using means previously beyond the means of our willful control, but thus changing our own nature in the universe accordingly. We can only be what we are willfully committed to become.

# FIDELIO

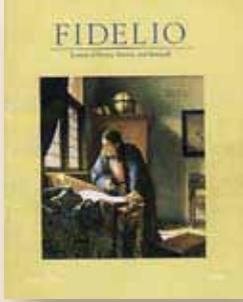
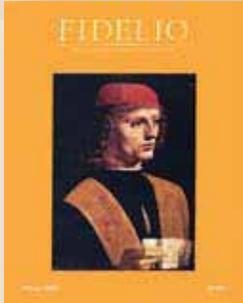
Journal of Poetry, Science, and Statecraft

From the first issue, dated Winter 1992, featuring Lyndon LaRouche on "The Science of Music: The Solution to Plato's Paradox of 'The One and the Many,'" to the final issue of Spring/Summer 2006, a "Symposium on Edgar Allan Poe and the Spirit of the American Revolution," *Fidelio* magazine gave voice to the Schiller Institute's intention to create a new Golden Renaissance.

The title of the magazine, is taken from Beethoven's great opera, which celebrates the struggle for political freedom over tyranny. *Fidelio* was founded at the time that LaRouche and several of his close associates were unjustly imprisoned, as was the opera's Florestan, whose character was based on the American Revolutionary hero, the French General, Marquis de Lafayette.

Each issue of *Fidelio*, throughout its 14-year lifespan, remained faithful to its initial commitment, and offered original writings by LaRouche and his associates, on matters of, what the poet Percy Byssche Shelley identified as, "profound and impassioned conceptions respecting man and nature."

**Back issues are now available for purchase through the Schiller Institute website:**  
[http://schillerinstitute.org/about/order\\_form.html](http://schillerinstitute.org/about/order_form.html)

## EDITORIAL

### FIRESIDE CHAT

# A Four-Power Agreement Is Necessary To Develop the World

by Barbara Boyd

*The following is the edited transcript of a presentation by Barbara Boyd on the LaRouche PAC's weekly Fireside Chat Internet program on Thursday, Nov. 8, 2018. An [audio](#) recording of the full discussion is available.*

I'm going to start by taking you back to a moment in December of 1982. That moment was a conference held by this movement in Washington, D.C. I remember my state of mind in listening to what Lyndon LaRouche had to say there. This conference occurred after five years in which this political movement saturated the U.S. population, together with policy circles in Washington, D.C., with LaRouche's idea of the Strategic Defense Initiative (SDI)—the idea that it were possible to create a defense against thermonuclear weapons and thermonuclear war.

On that particular occasion, LaRouche told all of us—most emphatically—Look, the SDI, my SDI, this concept has to become a reality literally within days, or humanity is going to face the probability of nuclear war.

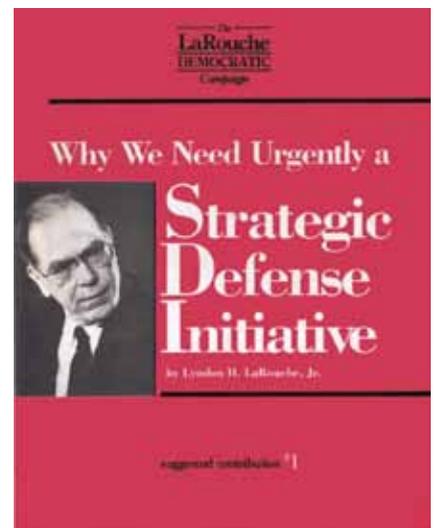


EIRNS/Stuart Lewis

*Lyndon LaRouche addresses a conference of his movement in Dec. 1982.*

Now, this was not just some kind of Cassandra claim being made by Lyndon LaRouche. At the time, he'd already been working with the Reagan Administration on his proposal for a while; he was actively discussing it through back channels with the Russians. He knew that what was about to happen was potentially a very dangerous drift into an actual world war; he knew that to be a physical fact.

As a result of that speech at that conference, the people in that room, which was not thousands and thousands of people,





White House

*President Ronald Reagan addresses the nation on national security, including his plans for the Strategic Defense Initiative, on March 23, 1983.*

but a small force of probably the equivalent of many of the people who could be on this phone call tonight, and their immediate peripheries, if you will. We went to work, and on March 23, 1983, President Reagan said, in a national speech, to the great shock and surprise of most of his advisors, that he was going to support the Strategic Defense Initiative, the idea Lyndon LaRouche first began circulating in 1977.

The fact that this happened, that it even *happened*, was the result of two factors: the first was a saturation by this organization and our allies of a huge swath of the United States population, a targeted bunch of people—scientists, engineers, intellectuals, farmers, machinists, the working classes of the United States with this idea. And it created the intellectual base within the population which was ready to assimilate the idea that Lyndon LaRouche had proposed, and enthusiastically embraced it at the point that the President opened up and accepted it. And the second condition for the prospect of that idea coming into existence, was that you had a President who was ready and willing to accept this idea and promote it, whatever the other

limitations were, of which there were many on the economic front within the Reagan Presidency.

### **The British System Is Dying**

The result of that was essentially the collapse of the then British system, which was divided into two regimes, both of which the British had a substantial amount of control over. One was in the Soviet Union, and the other was in the so-called West; the British idea was that they could keep both of these systems under persistent warfare or Cold War. The unfortunate side-product of that arrangement was that it could blow up at any time into a nuclear war because of the insane doctrine of Mutually-Assured Destruction.

LaRouche proposed the idea of the SDI in the context of a battle against the British Empire, and the globalist financial regime which was born anew on August 15, 1971 with the death of the Bretton Woods system. He proposed to break the entire British system and to put back on the world's agenda Franklin Roosevelt's idea of nation-state to nation-state cooperation and collaboration in ending colonialism once and for all, and putting the world on a renewed but entirely new scientific and cultural platform.

This is a powerful demonstration of what Lyndon LaRouche always says: bold, impassioned, and scientifically correct ideas are the actual forces which make history; not mortal human beings or the temporal changes we see in elections or electorates.

As many of you know, the British system soon reasserted itself after Reagan's breakthrough speech, through the offices of George H.W. Bush and the Bush/Margaret Thatcher developed so-called "New World Economic Order," courtesy of the City of London. This was a reconfigured imperial arrangement of free trade, international banking, and financialization and looting of the most basic of human needs, such as health-



EIRNS/Stuart Lewis

*President George H.W. Bush and British Prime Minister Margaret Thatcher.*

care. It was a modernized form of colonialism which completely subjugated the United States itself through the Carter administration, the Volcker strangulation of the economy, the Bush administrations, the Obama administrations, the evolution of our now-incompetent and stupid elites who have no idea how to actually run an economy. This is what this political movement has been fighting and resisting through the auspices of LaRouche's idea ever since August 15, 1971.

Right now, we can see in the outcome of the mid-term elections something that actually came to fruition in 2016, when Trump was elected: The system of the British is dying. You see it in the election of Trump; you see it in Brexit; you see it in similar movements in Europe; and you see it in China's great Belt and Road Initiative. The force of change which swept the world in 2016 is still out there, as we discovered through our intervention in this election, and it has really survived every attempt at regime-change that the British have thrown at Trump. It has exposed in the process whole aspects of the machinations of Empire which the public can now view. The emperor really doesn't have any clothes.

### The 'Spirit of 2016'

That "Spirit of 2016," as I'll call it, has survived the billions of dollars which the British steered into buying the House and the Senate in this election. Just think about it: Almost a quarter of a billion dollars was spent by just two people—Tom Steyer and Michael Bloomberg—to buy the Congress and essentially get them to impeach Trump. The defeat of this force—and make no bones about it, they were defeated in the election—creates the conditions for a much bigger fight that we have to now undertake.



EIRNS/Robert Baker  
*Ron Wiczorek addresses a campaign meeting in Sioux Falls, South Dakota on Oct. 14, 2018.*



EIRNS/Gabriela Carr  
*Kesha Rogers (right) campaigning in Houston, Texas.*

It's a different fight than the fight for simple survival, the one which we've actually been in. Right now, we have an enormous opportunity for making a giant change for the sustained advance of the entire human race; and of course, along with it, our very beleaguered, impoverished population here in the United States, which has been devastated by the globalism which Trump so rightfully opposes.

Applying Lyndon LaRouche's oft-used method of what he calls *analysis situs* to what happened in the last months of 1982, with the breakthrough on the SDI, and what is happening now, you can see that many things are very different, but some things are the same and really deserve some emphasis. What we accomplished with the Campaign to Secure the Future and the campaigns of Kesha Rogers and Ron Wiczorek, our field operations in the Midwest and New York City and on the West Coast—was a really big dissemination of our central ideas; LaRouche's Four Laws and the vision for where humanity must be one hundred years from now.

We have a President who has been receptive to these ideas and knows them in his own way. We have a President who has been attacked directly by the British because of ideas he holds, and he is smart enough to know

that that attack will not end until the British stand totally defeated and exposed. He does not articulate ideas the way LaRouche would. But as my friend Bruce Director notes, Trump uses the word “nationalist” like LaRouche uses the term “nation-state,” and that, rather than whatever proclivities arise from a childhood and adolescence in Queens, New York, the proper use by Trump of the term “nationalist” is what has reaped the murderous rage of the Empire.

It is because of President Trump’s defense of a world order based on national sovereignty, rather than the globalist order controlled from the City of London, that the British have been and still are out to eliminate him at whatever cost, and he knows this. As against LaRouche, British rage takes the form of accusing Trump of racism, anti-Semitism, and all sorts of other names *du jour* for those who oppose the Empire’s imprisonment of the human mind in the trap of identity politics. Unlike LaRouche, he does not have the studied and worked out ideas that can extricate all of us from this mess quickly. That’s where this political movement comes in.

### **The Power of Ideas**

If you are tempted to think that our impassioned circulation of these ideas in the Campaign to Secure the Future was by a small movement and to no effect, just listen to the middle part of Tucker Carlson’s analysis of the midterms last night, ending in his final wrap-up. He passionately told his audience that the reason for the losses that did occur in the House, the reasons why the elections only opened a door to triumph without representing triumph itself, was the lack of a coherent economic message coming from the President’s congressional and other allies.

Carlson pointed out that tax cuts mean nothing to the millions of Americans who do not pay taxes because they do not make enough money to pay taxes. He castigated those who would support the President, but would not recognize that 401Ks, the stock market, and all the “measures of success” touted in the elections, mean absolutely nothing to most of the suffering people of the United States and many of the President’s own supporters. He said that young people, in the “gig economy,” could not marry and could not have children; resulting in the backbone of society, the family, being completely undermined to the point of non-existence and creating the society of violence and instability we see all around us.



*Tucker Carlson*

C-SPAN

He said that he would never again support candidates who did not themselves passionately make creating the basis of a human existence, for having families, for this impoverished American population, their own sacred cause. This is really not the appeal you would ever think would be coming from Tucker Carlson or anyone with his history. It is very much the result of open discussion of the profound ideas which we have just circulated throughout the United States.

So, now, as the result of these elections, we have a situation in which the Democratic Party can either continue its British-directed road to destruction and resistance, or it can work with the President to legislate, as the President said yesterday. Our ideas about economics, just like LaRouche’s idea of the SDI, can become reality very quickly in this environment; that is, if all of us collaborate and, like a laser, really focus on making this a reality. In my mind, the door is now wide open, but we have to focus with the same energy and passion with which we moved within that short period of time in 1982-83.

It is not sufficient to just work with our own population to create a mandate for the President to pursue these policies, while we free him from the coup so that he can accept our creation. Remember, this attack on the President of the United States is coming from the British and coming through the international field in which they play. Their perverse and evil ideas not only have free reign through our stupid elites, they reach into China, Russia, India, and other nations who would be our partners in bringing about the necessary change. We can’t just flank the British system, we have to totally eliminate it; dismantle it.

## FDR's Bretton Woods, LaRouche's Four Powers

This process can only occur through the proposal LaRouche made about a Four-Power agreement, implementing Franklin Roosevelt's idea as a New Bretton Woods monetary system. That's the big idea we have to now bring into existence within the shortest possible time. A credit system for developing the world is the absolutely necessary companion to the credit system and capital budgets we can now move to create in the United States.

As Lyndon LaRouche has demonstrated again and again, the growth of our own economy is completely dependent upon just such a new system of trade, on a worldwide division of labor functioning at the highest level of possible advanced technologies. If you think this idea is somehow beyond the population at this point, you just aren't thinking clearly or creatively enough. After all, in my lifetime, I have seen this poor bedraggled U.S. population actually understand and passionately embrace LaRouche's concept of the Strategic Defense Initiative, which is about as complex a concept as you can possibly put across.

When we directly asked LaRouche, "How do you get these ideas across to a population which seems so uneducated or mis-educated?" he has always been unflinching. "Go ahead and find their access points," he said. "Many of them will be individual. Find whatever you can and use it to the hilt to educate with the greatest passion. Never, ever, reduce profound ideas and talk down to people: Reach to find a language by which to simply and elegantly communicate the most profound ideas. That's your challenge as an organizer; that's your challenge as a teacher."

What Helga Zepp-LaRouche spoke about today in her Schiller Institute New Paradigm webcast is a development of what Lyndon LaRouche said in 1984, about certain fundamental principles of a New Paradigm. This is what we now have to begin a major fight for. In a 1983 [statement](#) that he called "A Draft Memorandum of Agreement between the United States of America and the USSR," he said:

The political foundation for durable peace must be: a) The unconditional sovereignty of each and



creative commons

*British troops capture Chin-Keang-Foo on July 1, 1842 in their First Opium War against China.*

all nation-states; and b) Cooperation among sovereign nation-states to the effect of promoting unlimited opportunities to participate in the benefits of technological progress, to the mutual benefit of each and all.

The most crucial feature of the present implementation of such a policy of durable peace is a profound change in the monetary, economic, and political relations between the dominant powers and those relatively subordinated nations often classed as "developing nations." Unless the inequities lingering in the aftermath of modern colonialism are progressively remedied, there can be no durable peace on this planet.

So, LaRouche proposed that the four major economic powers in the world (in terms of population), get together and draft an agreement by which we replace the British monetary system with a worldwide credit system. He based this on the common interests of these nations, and the common experience they've had with the British Empire. We had, of course, our successful Revolution for Independence from England.

India was forced through wars and depopulation and export of opium and all sorts of depravations under the British Empire. It was the crown jewel of that Empire, and suffered horrendously for it, a suffering

which still takes place today in the form of the caste system.

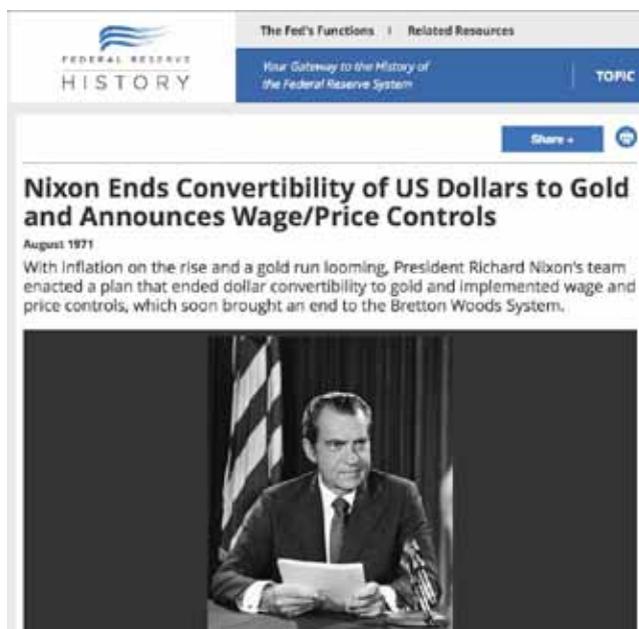
The British waged two opium wars against China, and of course, the British operations against Russia have gone on from time immemorial. So, we have a common experience in knowing the manipulations of empire. These manipulations of empire can commonly be attributed to ideas also, but to very bad ideas: the ideas we can call the Anglo-Dutch liberal system at this point, represented by Adam Smith, Parson Thomas Malthus, Halford Mackinder, H.G. Wells, Bertrand Russell, the whole satanic gang.

The problem in the world that all of these nations have to perceive at this point, and other nations have to perceive, is not the United States; it's not Russia; it's not China. The problem is this idea system of the Anglo-Dutch liberal system. The ideas of free trade, globalization, Malthusianism, radical environmentalism, and limited sovereignty and perpetual war.

So, for those who don't know it, the original Bretton Woods system was created at a conference at Bretton Woods, New Hampshire, July 1-22, 1944. It was originally committed, per President Roosevelt's idea, to extending low-interest credit to development projects throughout the world, in order to end poverty. The credit to be extended was not to be used to refinance already existing loans, let alone any speculative activity like today's genuinely bankrupt and unpayable financial derivatives-type of activity. That Bretton Woods system, despite many problems in the post-World War II period, worked very well in fostering development in the world.

But then on August 15, 1971, Richard Nixon jettisoned the Bretton Woods system—the fixed exchange-rate, gold-reserve system which facilitated all trade in the world—and replaced it with a floating exchange-rate system, which not only created the basis for huge currency wars and rapid devaluation of any national currency, but also created the basis for deindustrialization of every advanced sector nation, including right here in the United States. We've been living under that anti-Bretton Woods system since then, right up through November 2016.

Trump decided on, and campaigned on the idea of reversing gears on this globalist system, ending what he calls the worldwide supply chain of free trade, and returning major industrial productive activity to the United States. You can say that in some respects, our economy is so dilapidated at this point—particularly



Richard Nixon Library

*President Richard Nixon, announcing his New Economic Policy in 1971, which ended Franklin Roosevelt's Bretton Woods system of fixed exchange rates.*

with respect to machine tools and other things which we don't make anymore—that certain protectionist measures up to a point might be called for to actually rebuild and foster the productive capacities of our labor force. But doing this in the context of the existing monetary system—the London financial system about to collapse—means that to avoid a calamity, worldwide production on a reciprocally beneficial basis between nation-states must be increased along with creating a new financial system.

### **Principles of the New Bretton Woods**

That is what has to be discussed, hopefully at these summits, which are about to occur over the next 30 days. We have to begin to create, with the greatest intensity possible, the conditions for this to work. In other words, Trump goes out and he says OK, I've made this deal with Xi, and I've made this deal with Putin, I've made this deal with Modi; but if nobody in the United States actually understands what he's done, and he's got a horde of British jerks who are still trying to overthrow him, his deal dies on the vine. We're the people who have to prevent that from happening by creating the understanding in the population that will allow this idea to come to fruition and to create a mandate for the President to do it.

So, what are the principles for this New Bretton

Woods? I think the principles that LaRouche has articulated and would continue to articulate at this point go something like this:

First of all, this new system has to permit open access for all nations to fundamental scientific discoveries. That allows us to hasten development, because technological progress is the means not only to increase the potential relative population-density of societies, and even to maintain present levels of population potential.

Second, the advanced nations should concentrate on exports of capital goods to developing nations. When we've got the highest level of capital goods production, and we're moving those goods through our

You can almost say that it doesn't matter—because of the increases in the productive powers of labor—whether you get paid in dollars for that or not. The whole emphasis here is on reindustrialization of the advanced sector nations, but on a higher economic and infrastructure platform, and taking that development as soon as it occurs and exporting it to the developing nations to allow them to develop.

Finally, since the fastest rates of technological progress are to be found in the results of space exploration, and since the effect of joint missions to the Moon, Mars, and in near-Earth orbit naturally unites mankind as a whole, fostering cooperation here is an excellent way to jumpstart the entire world's economy. Cooperation in such a

great adventure can quickly bring cultural optimism and spread it throughout the world.

### Our Immediate Task

So, this is our immediate task. We have to move now to create a Four-Power Agreement that quickly creates, in turn, a new monetary system dedicated to fostering development of all of the nations of the Earth. This has to be, for political reasons, initiated by the United States, but in collaboration with Russia, China, and India. This, and only this, will bring about the final victory over this British system with a new birth of a creative future for all of humanity. That's the potential which has been created out of the fight we have just made, whether you realize it or not. Just like those pioneers who

listened to LaRouche in 1982, if we focus our passion now, we can actually bring this into being.

Unlike that historical moment of 1982, however, the conditions for a sustained victory over the British Empire right now are much, much better. The British have been totally exposed through their efforts in the coup; the Belt and Road has been undertaken so that people can actually see what large-scale development looks like, and how countries can rapidly advance. We've seen, in the course of our Campaign to Secure the Future, how much our own population aches for precisely this type of bold idea and the economy of the future. This opportunity is really sitting right before us now if you look carefully; and we'd be fools if we don't jump on it.



ITER

*The Chepetsky Mechanical Plant in Glazov, Russia, where more than 120 tons of niobium-titanium superconducting strands have been produced for ITER's poloidal field conductor.*

economy at a rapid rate and we're exporting at the highest technological level, we're bringing our labor force back up to snuff. We're bringing our labor force back up from the horrible, dilapidated state we're in now, into something resembling a productive economy. This has been done with very furtive steps in the defense sector at this point by the Trump administration, but it's got to be massively advanced through the entirety of the U.S. economy.

Were all of the advanced sector nations to export high technology goods to developing nations within a fixed exchange-rate system, the productivity of both the advanced sector nations, but also the developing sector nations, would be simultaneously increased.

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